Railway Age

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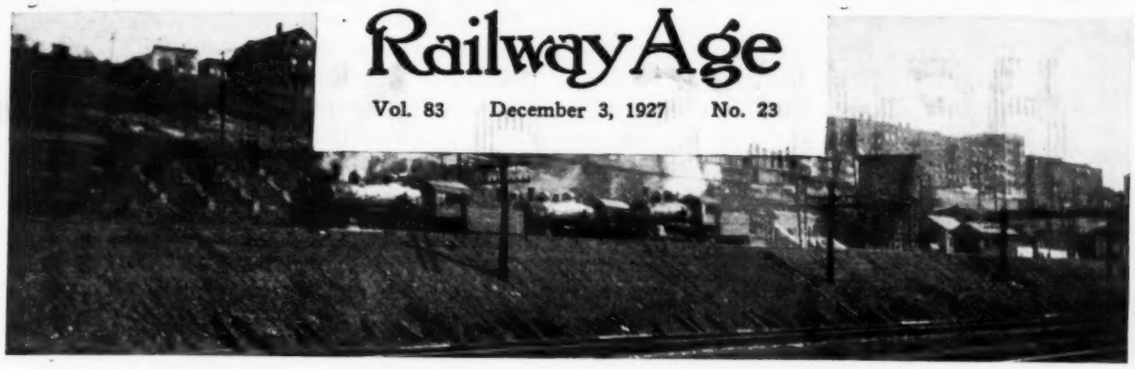

New York Central, Putnam Division Terminal, New York City

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Railway Age

Vol. 83, No. 23 December 3, 1927

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Daily Yard Costs

THERE are few costs that are quite as elusive as yard costs. It is an easy matter to lose considerable sums in yard operation without any particular mismanagement other than lack of the closest attention to all details. Several roads have found that the yardmaster or other officer in charge is able to control his costs with much more facility if he is provided with a statement each morning showing his costs for the day before. These, of course, must be based on partial estimates rather than actual figures, but a number of roads, the New York Central and the Northern Pacific for example, have found that such daily statements can be rendered with sufficient accuracy to bring about material reductions in yard costs. An extra yard engine put on to meet some traffic emergency has not infrequently been permitted to remain for a day or two or even a week, after the emergency has passed. This does not seem particularly harmful to many yardmasters, but when they see each morning the extra $75 or more that this job is costing, they are not as likely to permit the expense to continue needlessly. An extra engine is not so striking as an extra $75 per day of needless expense. This is only one of the many advantages gained by daily yard cost statements. On both of the roads named, these statements have resulted in savings in practically every factor of yard operation.

Reducing Costs of Handling Non-Remunerative Passenger Business

ONE of the most serious of contemporary railroad problems centers in the passenger traffic department. This problem is the familiar one of a severe decline in passenger business without a corresponding reduction in the expense of providing the service. Passenger traffic officers are fully awake to the seriousness of the situation and are displaying considerable energy in merchandising their service in the effort to retain as much business as possible and to attract new business to take the place of that which has been lost. However, there seems to be a consensus that much of the traffic which has left the rails has gone beyond recall, at least as long as the country is so prosperous that almost every family has its own automobile. Most of the business lost to the automobile is short-haul local traffic and service provided in this field at present is largely non-remunerative. Increasing expenses to improve service on long hauls where business is good is undoubtedly a wise policy. But even if the passenger traffic departments should succeed in building up long-haul business sufficiently to recoup all their losses in the short-haul field, they would still have with them the problem of the non-remunerative local train. The passenger traffic officer's problem, therefore, is two-edged: (1) He must endeavor to attract new business and hold that which he has; (2) he must try to reduce expenses by curtailing service for which little or no demand exists. In many cases, due to regulatory policy, service cannot be decreased, and the only possible relief lies in offering a substitute service which is more economical for short-hauls and light loads than is the steam train—such as the rail motor car or the highway motor coach. In any event in this case the problem of decreasing costs is integral with that of increasing business—both must be considered.

What the Young Men Are Thinking About

NOT a few of the railroad officers who recently acted as vocational counsellors at the Younger Railroad Men's Conference at Jacksonville, expressed surprise at the questions propounded by the young men in their groups and as to the serious attitude which they have toward the work in which they are engaged. Some of these young men, at least, are thinking in a most intelligent and large way about their work and their future in railway service. Too often we are inclined to characterize this as a jazz age and to question whether those who are now starting at the bottom of the ladder recognize the seriousness of the problems which they are facing or the necessity of a careful and thorough preparation for their life work. Naturally a certain percentage of any given number of young men are more or less thoughtless or careless and will fail to face up seriously to their tasks. Observation at Jacksonville, however, would seem to indicate that few of the delegates were in this frame of mind. That some of the railway officers were impressed by this fact is indicated by the consideration now being given to the reproduction of such conferences on a smaller scale on various railroad systems or in different regions. Meanwhile, the American Railway Employed Boys' Clubs, of which there are now about 125, are steadily growing, both in number and in effectiveness.

Motor Vehicles and the New England Flood

THE railway which has a fleet of highway motor coaches is at a distinct advantage when a flood or other disaster seriously disrupts its rail service. This was conclusively proved by the Boston & Maine in the recent New England flood. By reason of the flexibility of the highway coach its use in many cases enabled communication to be established with isolated cities days before service by rail could be restored. More than that, the highway coach was used in some instances even after rail communication of a sort had been restored to handle the bulk of passenger business—causing a minimum of interference with work trains and freight trains until normal conditions were restored. The relief from pas-

senger train interference naturally made for more efficient work train performance and enabled a severe freight congestion to be relieved much sooner than would otherwise have been possible. In other cases the highway coaches were able to reach isolated train crews and bring them to terminals where they could be used, and elsewhere the coaches were used to take repair forces to points which could not be reached by train. The motor truck, working with tractor steam shovels, also was put to good use in flood rehabilitation work—one road, the Central Vermont, placing a number of gangs on roadway and bridge restoration at points which even yet are inaccessible by rail. Railroad men have always been noted for their resourcefulness in emergencies—for their ability to get traffic moving again after the most trying disturbances. The motor vehicle has proved a valuable tool in giving increased effectiveness to this resourcefulness in the face of disaster.

Heavier Striking Castings Needed?

TO be an alarmist regarding any situation is as foolish as to be wilfully blind to conditions. The draft gear problem now confronting American railroads in practically no way involves safety of operation. Draft gear conditions in general may be improving slightly, although that point has not been demonstrated. The unfortunate part of the whole matter is that the results of operating cars with defective draft gears do not appear on the surface and consequently there is a serious tendency to overlook the importance of adequate gears. An apt illustration of this was afforded slightly over a year ago when the mechanical department head of a small railroad, operating about 1,200 freight cars, told the newly appointed master car builder that his first job would be to design and apply heavier striking castings to replace those which were broken on nearly 90 per cent of the freight cars owned by this road. After an investigation, the master car builder was able to show that efficient draft gears were needed rather than heavier striking castings, and an energetic campaign for the better maintenance of draft gears was instrumental in greatly reducing the casting breakage. The latest figures issued by the Transportation Division indicates that the cost of repairing freight cars is in excess of $150 per car per year, a substantial proportion of which (sometimes estimated as more than 50 per cent) is chargeable to shocks received by the cars due to defective and deficient draft gears. There seems to be no question that the railroads can well afford to devote more attention and spend more money in the maintenance of this vital part of the car structure.

Analyze Fuel Records Carefully

ONE prominent English railway man is quoted as saying that "statistics are most misleading things" and another recently called attention to the possible errors in applying averages and, in general, to the difficulties in compiling and studying statistics owing to dissimilar practice and varying definitions. With all their limitations, however, statistics have been one of the most important factors in raising modern standards of railroad service and efficiency. The constant urge should be for greater accuracy in compiling data and more intelligent interpretation of the figures compiled. Nowhere is this more essential than in the case of fuel records and figures. The mere fact that fuel consumption has decreased per thousand gross ton-miles on any particular railroad or division does not necessarily prove more efficient operation. Before drawing conclusions, due consideration must be given to the varying quality of fuel and seasonal conditions, the ratio of empty to loaded freight car miles, locomotive and roadway conditions, block signals, method of despatching, balance of tonnage in different directions and other factors outlined by N. D. Ballantine, formerly assistant to the president of the Seaboard Air Line, in an address at the last annual convention of the International Railway Fuel Association. The influence of varying seasonal conditions is well known. Differences in the quality of fuel, however, are not so generally allowed for. Mr. Ballantine is authority for the statement that, as a result of keen competition in the coal industry, more machine mining and a consequent smaller amount of foreign matter, the coal purchased by railways in 1926 contained five to eight per cent more British thermal units per pound than that purchased in 1920. Obviously, disregard of this factor, which is selected only as an example of a number of others, may well be responsible for drawing erroneous conclusions. Records of fuel consumption are of great potential value. They must be kept currently and analyzed intelligently if real accomplishments in fuel economy are to be recognized and credit given to the efficient men and organizations responsible.

The Decline in l.c.l. Freight Tonnage

THE volume of l.c.l. freight handled by the Class I railways in 1926 was approximately 25 per cent less than the volume of such freight that they handled in 1917. This is in marked contrast with the comparison of the volume of carload freight handled in these years, the Class I roads having shown an increase in the tonnage of carload freight over the ten-year period of approximately 10 per cent. In 1926, the Class I roads handled 68,224,846 tons of revenue l.c.l. freight, while they handled 91,869,356 tons of revenue l.c.l. freight in 1917. They handled 2,397,143,760 tons of carload revenue freight in 1926, as compared with 2,178,165,697 tons of revenue carload freight in 1917. The tonnage of l.c.l. freight handled has fluctuated rather violently over the ten-year period, rising to a peak of more than 98 million tons in 1918. The volume of l.c.l. freight fell to approximately 67 million tons in 1921, rose to more than 73 million tons in 1923, and fell again to approximately 68 million tons in 1924, where it remained with but slight increases in 1925 and 1926. The volume of carload freight on the other hand has increased fairly steady except in 1921 and 1922, when it fell considerably below two billion tons. The decline in l.c.l. freight traffic volume, while arresting in itself, is even more marked in view of the increase in the volume of carload traffic. It is generally recognized that an important cause of the decline in the volume of l.c.l. traffic has been motor truck competition. It is only natural that a considerable volume of l.c.l. traffic should be won by the motor truck since it offers a transportation service over short distances which in most instances is considerably more expeditious than the railways can afford to provide under existing methods on their rails. However, many of the railways themselves are turning to the motor truck to speed up their l.c.l. freight service. Furthermore, important developments in the near future in the operation of freight containers suitable for l.c.l. freight shipments are anticipated. These supplements to the freight car are expected to win back part of the l.c.l. freight traffic which has been lost and in addition to enable it to be handled at a profit.

Appointments to the Commission

PRESIDENT COOLIDGE is considering candidates to succeed Chairman Esch and Commissioner Hall of the Interstate Commerce Commission. Mr. Esch's term will soon expire and there is doubt about his reappointment because both he and Commissioner Meyer are from Wisconsin. Commissioner Hall will voluntarily retire when he gets his docket cleared up.

It has come to pass that a president has hardly any other appointments to make that are as important as those of members of the Interstate Commerce Commission. Perhaps there are no positions in the government so difficult to fill satisfactorily.

Year by year Congress, by statute or resolution, gives the commission more and more huge tasks to perform. A majority of the present members of the commission have assumed, especially as regards the law of valuation and the rate-making provisions of the Transportation Act, a very large measure of responsibility and authority by pursuing a policy which seems to many persons plainly out of accord with the purpose and even plain language of the valuation and rate-making provisions. Owing to the power which the commission actually has been delegated and to its present tendency to warp the constitution and statutes to make them fit whatever policy it wants to adopt, the character of the appointments made by President Coolidge may exert a tremendous influence on the future of the railways and on the economic welfare of the nation.

The intent of the laws creating the commission and which it administers is that it shall be an expert and impartial body. As its principal function is that of regulating transportation by railroad its personnel should have an expert knowledge of railroad matters. This it is usually assumed to have, and therefore a large part of the public is likely to consider it as presumptious for anybody to criticize the commission's decisions as to criticize those of the Supreme Court. But members of the Supreme Court serve much longer than commissioners, it deals only with legal questions, and its members always are eminent lawyers, and therefore experts on these questions. Has there ever been, or is there now, anything approaching equal reason for regarding members of the Interstate Commerce Commission as experts on railroad questions?

Have Commissioners Been Experts?

The railroad business is so gigantic and complicated that many years of arduous study and work are required by men of first class ability to acquire an expert knowledge of it. If a member of the commission is to have such knowledge he must either have it when appointed or acquire it after appointment. Effective Federal regulation began in 1906, following the passage of the Hepburn Act. Including those then on the commission, its membership has since included some 25 men. Fifteen of these have been lawyers, of whom two had served on state commissions, one had been a railway president and one had been a congressman who had played an important part in drafting railway legislation. Two were professional economists who had been members of state commissions. Two had been newspaper men, of whom one had been a member of a state commission. One had been president of a large railway brotherhood. One had been a railway employee, an inspector of locomotives for the Interstate Commerce Commission and assistant director of operation of the Railroad Administration in charge of the mechanical department. One was an expert authority and writer on railway economics and finance. One had been a railroad vice-president. One had been a silk salesman.

Thus, 11 commissioners had some special knowledge of railroad matters when appointed, although most of them could not be regarded as having expert knowledge. The remaining 14 had no special knowledge at all. Not more than one-fourth of the men who have served on the commission during the last twenty years could be regarded as having had, when appointed to it, special knowledge of the problems with which they had to deal. The average number of years served on the commission by the men included in this list who are not now members was 10 years. The average number of years that have been served by its present members is less than eight years, and if two entirely new appointments are made the average will be reduced to about six years.

Candid consideration of this record would hardly suggest the conclusion that the commission ever has been or is now actually an expert body. Mere appointment to it does not make a man an expert on transportation matters, as many people seem fondly to assume. Most of its members during most of the time they have been doing the work of regulation have been engaged in getting the experience and knowledge that would be regarded as prerequisite to beginning the performance of duties of comparable importance for a large railroad or industrial corporation.

The functions and duties of the commission are of so judicial a character that one of the most important requirements of its personnel should be a disposition to administer regulatory laws with the greatest practicable impartiality. It is their duty to carry out the laws and not to make them or re-make them. Unfortunately, however, men who have acquired special knowledge of railroad matters—whether as members of state commissions constantly appearing as litigants against the railways, as representatives of business organizations that have carried on struggles with them regarding rates, or as railroad officers—are not likely to be wholly unprejudiced, and are still less likely to be credited with being so. The present commission includes four former members of state commissions, one of whom is an avowed advocate of government ownership and one of whom formerly appeared against the railroads in valuation proceedings as attorney for the state commissions. It includes another member who was for years attorney for business interests of Spokane, Wash., in one of the bitterest and most prolonged litigations over rate matters ever conducted against the railroads. It includes still another member whose former relations with radical labor leaders and position and attitude under government control did not encourage the hope that he would be impartial toward the railroads.

Commissioners Eastman and Woodlock

The railroads made practically no objection to the appointment of any of these men, who now constitute the majority of the commission. When, however, President Coolidge nominated Thomas F. Woodlock, who had a distinguished reputation as an authority on railway economics and finance long before effective regulation was adopted, and Richard V. Taylor, who had been a railroad vice-president, all the forces of radicalism, inside and outside of the United States Senate, raised a clamor against their confirmation.

The Transportation Act obviously was passed not only to return the railways to private operation, but to give private management a chance to succeed. A short time ago the *Railway Age* published an editorial commenting on a report that had been written by Commissioner Eastman advocating government ownership, and raising

a question as to the fitness of a government ownership advocate for administering a law plainly intended to maintain private ownership. Radical papers in different parts of the country have set up a howl about this editorial as an attack upon Mr. Eastman, and have contended that it is unfair to imply that a man who is opposed to private ownership will not be disposed to favor such administration of the Transportation Act as will be fair and helpful to private management. And yet these very same papers joined in the propaganda against Mr. Woodlock because, although a man of the highest reputation for ability, judicial temperament and public spirit, as well as a recognized expert on railway economics, they claimed he was not fitted for a member of the commission because he hailed from Wall street! Mr. Eastman, according to the radicals, being an advocate of government ownership is an ideal man for a commissioner, but they loudly applauded when radical senators put Mr. Woodlock on the witness stand and "grilled" him to find out if his economic views were not such that they would cause him to favor regulation that would enable the railways to prosper under private ownership!

The outbreak of the radicals against Messrs. Woodlock and Taylor, especially the former, should have been, and we hope has been, a warning to the conservative interests of the country to pay more attention to appointments to the Interstate Commerce Commission. Doubtless it is undesirable that there should be appointed any man who is extremely "pro-railroad" or extremely "anti-railroad." The plain fact is, however, that numerous men have been appointed to the commission who were notoriously anti-railroad while extremely few who could be regarded as "pro-railroad." Formerly railway officers apparently hoped that time, experience and responsibility would cause commissioners having anti-railroad prejudices when appointed to soon lay them aside, but in only too many cases the actual results have not justified this hope. Certainly it seems not unreasonable to suggest that if men with anti-railroad prejudices are to continue to be appointed to the commission, their tendencies should be nullified by the appointment of an approximately equal number of men with pro-railroad prejudices.

Limitations on President's Choice

Of course, everybody will agree, in theory at least, that the appointment of men prejudiced in either one way or the other should be avoided if practicable, and that members of the commission should be selected solely because of their ability, their judicial temperament and their special fitness in other respects. Unfortunately, a president who desires to appoint only such men is restricted in his choice by limitations of various kinds of which the public knows little. For example, there is a demand from the politicians that all the different territories of the country shall be represented on the commission, and if the best available man happens to live in a territory that already is represented it may not be possible to get the senate to confirm him. Again, the best available man may live in a state that is not already represented on the commission, but if the two senators from that state oppose him "senatorial courtesy" will bar him. Then, the law forbids more than a bare majority of the commissioners to belong to one political party. Therefore, a man may be ineligible because of his politics, although in all other respects preeminently qualified.

There never was a time in the history of railroad regulation when the character of two appointments to the commission promised to have as important and far-reaching consequences as the two in immediate prospect, and there never was a time when political conditions justified more apprehension regarding the ability of the president to get fit men to accept appointment or to get them confirmed.

Rail Orders as a Barometer of Business

AT this season one of the chief topics of interest in most industries is the business outlook for the new year. This is as true in the railway and the railway supply industries as elsewhere. Here one indication of the extent of the activity in 1928 is becoming evident, at least insofar as roadway programs are concerned

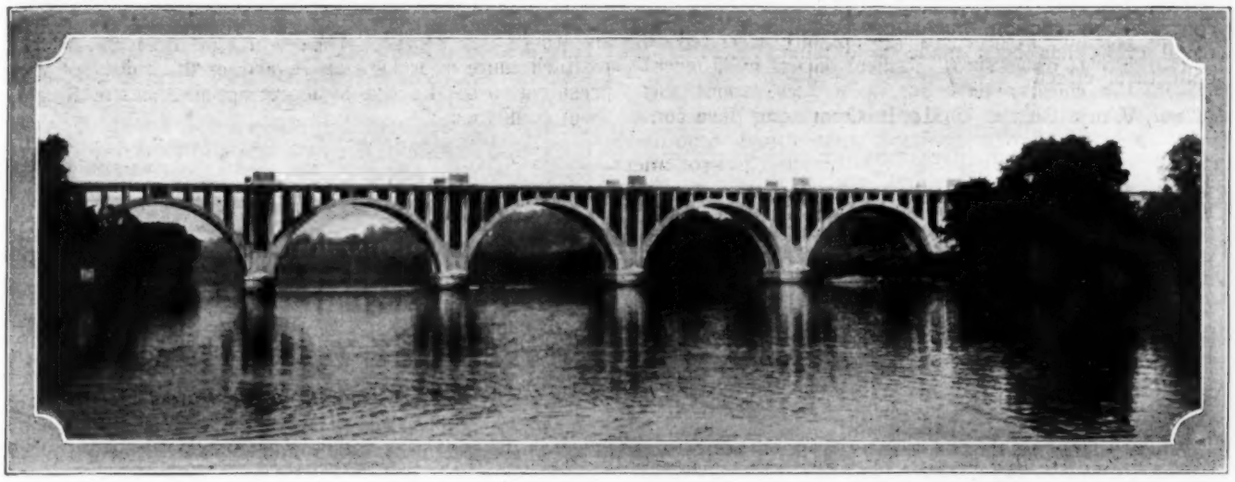
Rail orders constitute a criterion of the attitude of railway managements towards the future. With their accessories, they involve the expenditure of large sums of money. They must be placed several months in advance of delivery to permit orderly production by the mills. With the increasing tendency towards the laying of rails in the winter and early spring, the year's requirements of many roads are now being contracted for in the closing months of the year.

Rail orders are an index of maintenance programs because with them follow orders for joints and fastenings, for tie plates, for frogs and switches and for other track accessories. Rail orders also reflect the liberality of ballasting programs and other track betterment work, as well as schedules for bridge and building and other routine repair and improvement activities.

From the standpoint of rail production, 1926 was a record year with a total output of 3,217,649 tons and a total approximate domestic consumption of 3,085,304 tons, the latter figure being the largest since 1910 and being exceeded only four times in history. While the figures for 1927 are not yet available, it is known that they will approximate the high totals of last year.

As far as next year's rail requirements are concerned, it is now possible to compare the orders already placed for next year's necessities by a considerable number of roads with those placed by the same roads last year. Such a comparison for 18 roads, with a third of the country's total requirements, shows orders and inquiries to date of 1,074,915 tons as compared with 1,034,230 tons a year ago, an increase of approximately 40,000 tons or four per cent. This comparison is made conservatively as, for instance with the Pennsylvania where only the 200,000 tons specifically ordered are included in this year's figures, although official announcement has been made that the purchase of 300,000 tons of rails has been authorized and the additional 100,000 tons have been placed under option.

As far as rail orders are an indication of the attitude of railway managements towards the business outlook for 1928 and particularly towards railway improvement programs, there is every reason to anticipate a repetition of the active seasons of 1926 and 1927. Never in the history of this country has traffic been moved with as great regularity and expedition as in recent months. This service has been made possible primarily by the excellent condition to which the railway properties have been brought. The rail orders that are being placed to date indicate that it is the intention of railway managements to continue this improvement program through 1928 in order that they may place their service on a still higher level.



The Finished Structure

Concrete Features Extensive Improvements on R. F. & P.

New work at Fredericksburg, Va., involves large and attractive masonry bridge over Rappahannock river and four street subways

CARRYING out a program first contemplated as far back as 1906, the Richmond, Fredericksburg & Potomac has recently completed extensive line and station improvements at Fredericksburg, Va., which have cost in the neighborhood of $1,150,000. Specifically, these improvements include a new double-track, reinforced concrete multiple arch bridge over the Rappahannock river, approximately 3,700 ft. of main line change and grade elevation, and four reinforced concrete street subway bridges joined together and connected with the new river bridge by approximately 265 ft. of reinforced concrete viaduct and 500 ft. of retained embankment.

This work also included extensive additions and rearrangements in the passenger station facilities at this point, which involved the construction of 1,550 ft. of platform canopies at the new high level of the tracks, and the enlargement and complete reconditioning of the old passenger station on the street or original track level. As completed, the work at Fredericksburg rep-

The New Bridge, as Partially Completed

resents not only an unusually large piece of reinforced concrete construction, but a project in which an unusual effort has been made to obtain a pleasing architectural effect.

New Work Solves Difficult Operating Problems

There were two main reasons for the improvements at Fredericksburg. The first, and possibly the most important, was to provide a new double-track bridge over the Rappahannock river to replace the old single-track structure at this point, and thereby eliminate the

Looking North Over the Enlarged Passenger Station, the Princess Anne Subway and the Elevated Track Structure

only section of single track on the R. F. & P. main line between Washington, D. C., and Richmond, Va. This was highly important because of the heavy volume of traffic handled through Fredericksburg, which averages in the neighborhood of 75 trains a day, and also because of the fact that the old bridge and its piers, while in a good state of preservation, were being seriously overloaded.

The old bridge at this point was a 603-ft. steel deck structure, built in 1899, consisting principally of three 125-ft. truss spans and a 117-ft. truss span. These spans were supported on granite masonary river piers and abutments which were constructed in 1841. A description of these piers and abutments, which have served for over 85 years under loads far in excess of those for which they were designed, without any signs of disintegration or failure, appeared on page 373 of the August 27 issue of the *Railway Age*.

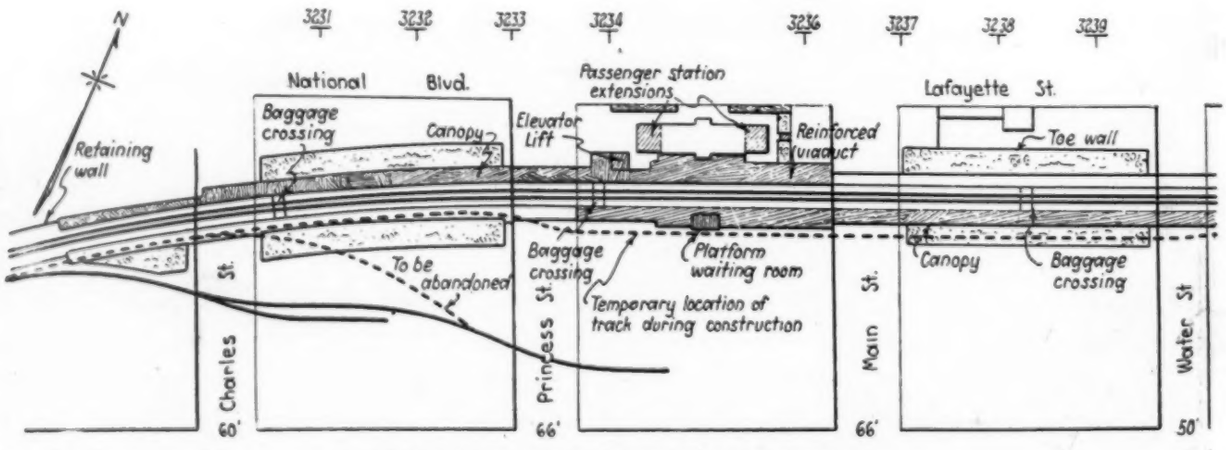
The second most important factor in deciding upon the extensive improvements at Fredericksburg was the desire to eliminate the sag in the line at the river crossing, and also to eliminate four important street grade crossings at the south end of the bridge in Fredericksburg. Both the sag and the grade crossings presented serious disadvantages, in that they formed a constant hazard to safety and a source of delays and expense, the train movements being at very slow speed. To overcome this condition, the new line and river bridge were constructed at a new elevation, 8.64 ft. above the level of the old bridge tracks, thus providing a level roadbed over the river and through the town, and affording sufficient headroom for crossings over the four intersecting streets by depressing the streets slightly.

In addition to these advantages sought and obtained through the work at Fredericksburg, there was also a desire to enlarge and improve the passenger station facilities at that point. This was accomplished successfully through the provision of long canopy-protected platforms along each of the main tracks at their new level, connected by stairs and ramps with the station building which was enlarged and modernized in every respect.

New River Bridge Is an Impressive Structure

The new reinforced concrete bridge over the Rappahannock river, which is situated practically parallel with and about 35 ft. west of the old bridge, is an 850-ft. structure, consisting of five 90-ft. arch river spans and five 40-ft. arch shore spans. Three of these smaller spans are at the north end of the bridge and adjoin a newly constructed approach fill to the north, while two of the shorter spans are at the south end of the bridge and connect with the concrete viaduct and street bridges leading through the station facilities to the south. All of the bridge arches, the crowns of which are about 50 ft. above mean water level, rest on concrete piers and footings which are carried down to rock foundations.

Following a design somewhat unusual, the five larger arches of the bridge are made up of two parallel arch rings, side by side, 5 ft. 6 in. apart. These rings are 12 ft. wide and have a crown thickness of 3 ft. which increases gradually to about 4 ft. near the springing lines. Supported on the arch rings are transverse walls forming open spandrels, which extend the full width of the rings and support the reinforced concrete bridge deck. Directly over the piers, two of these walls are 2 ft. 6 in. thick and are spaced 9 ft. 7½ in. center to center, while intermediate walls between piers are 2 ft. thick and are spaced 10 ft. 2½ in. center to center. Construction similar to this is also employed in the five 40-ft. arches at the ends of the bridge, except that paneled spandrel



Track Plan Across the Bridge and Through the Station

walls on either side enclose the areas between the arch rings and the bridge deck.

The bridge deck over the main arches is a 16-in. reinforced concrete slab, while that over the smaller arches is a 13-in. slab. Throughout, the deck is trough-shaped to retain the ballast, and directly over each pier, on each side, it is extended into 14-ft. by 5-ft. areas to form safety bays. The entire upper surface of the deck slabs is thoroughly waterproofed with two-ply cotton fabric membrane waterproofing which is protected from the cutting and abrasive action of the ballast by a 2-in. course of 1:2:4 concrete, using ½-in. stone. The overall width of the bridge deck between safety bays is 32 ft. 6 in., this width providing ample room for the two bridge tracks which are spaced 13 ft. center to center. Ballast over the bridge is crushed limestone rock placed to a depth of about 18 in. beneath the ties. This is drained through the provision of four-inch cast iron drains on both sides of the bridge directly over the piers, which carry the water clear of the concrete to within a few feet of the river level.

In all of the concrete work, Blaw-Knox inundation equipment was used to overcome the effect of bulking in measuring the sand, and in some instances, an admixture of Celite was made to the concrete to increase its workability. The maximum amount of admixture used was three per cent by weight of cement.

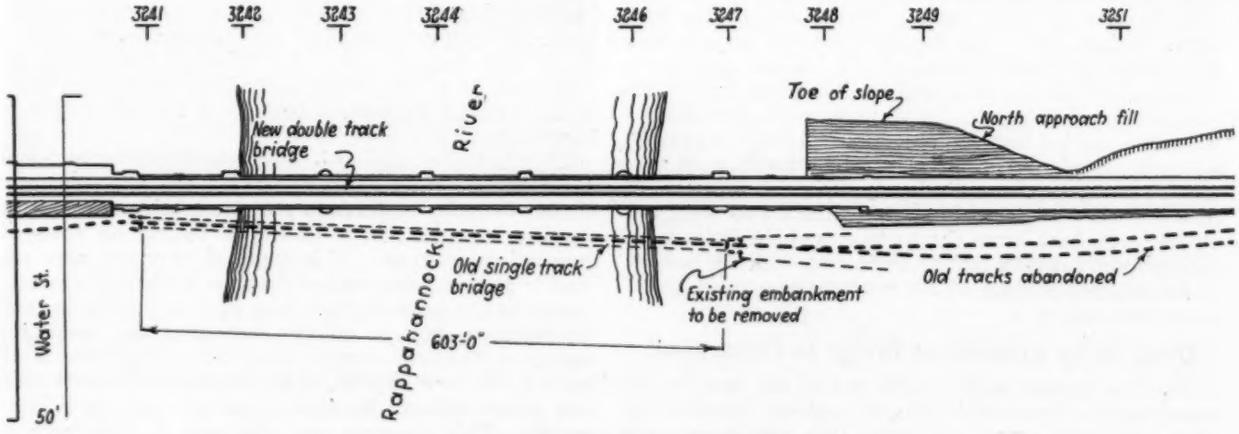
All materials were accepted subject to the specifications of the American Society for Testing Materials, which were also observed in the making and testing of test cylinders. In the arches and walls of the bridge, 1:2:4 concrete was used with a consistency that gave a slump of not over six inches. In the foundations and piers, 1:7 concrete (combined aggregate) was used with a 3-in. slump, and in the slab construction, a 1:5 mixture (combined aggregate) was used with a slump of not more than 6 in. The average strength developed by the 1:2:4 concrete was about 2500 lb. at 28 days, while the 1:5 mixture developed strengths as high as 3,500 lb. at the same age. During freezing weather in the winter months, the aggregates were heated with hot water, and warm water was used in the mixes. When the concrete was put in place it was protected by tarpaulins and kept above a freezing temperature by the use of steam heat. During the summer months when the temperature rose as high as 120 deg. in the sun, the green concrete was kept damp for several days by wetting it down at intervals.

As it was highly inadvisable to interfere in any way with the heavy traffic over the old bridge at Fredericksburg while the new bridge was being constructed, the new alinement of the railroad was laid out so as to place the new bridge west of the old structure, and a construction trestle was built across the river on the west side of this new alinement, from which all materials could be handled in the construction of the new bridge. This trestle was made up of timber piles, rigidly braced, with steel deck girders carrying cross ties and a three-rail track for the use of a standard-gage locomotive crane and narrow-gage contractor's cars. This track extended across the trestle between a concrete mixing plant and storage area at the north end, and a similar layout some distance beyond the south end.

Looking North Over the New Elevated Tracks and Platform Facilities at Fredericksburg

The foundations of the new bridge piers were carried down to rock, which lies about 8 to 15 ft. below the mean water level of the river. Foundation work was carried on inside of coffer-dams constructed of Lackawanna steel sheet piling driven well into the rock bottom and with the joints carefully rammed with fine cinders to preclude seepage. In preparing the foundations, the bed rock was cleared of all loose and disintegrated material, and excavation was carried at least six inches into the solid rock and leveled off or benched so as to give a good footing for the masonry. Concrete for the piers was chuted into place from small side-dump contractor's cars operated on the construction trestle.

The arches of the river spans of the bridge were constructed on Blaw-Knox structural steel centering, which



Track Plan Across the Bridge and Through the Station

did much to facilitate and speed up the work. The concrete in the arches was placed in sections, each section being allowed to take at least its full initial set before an adjacent section was poured. Following this arrangement, segments about 10 ft. long were poured first at the quarter points of a ring, then segments were poured near the haunches, then in turn on each side of the crown and at each springing line, and finally, a key section was poured at the crown. All of this concrete was handled from the mixing plants in two-yard concrete buckets hauled on narrow-gage cars by a contractor's locomotive, and was put in place by a locomotive crane with an extension boom and outriggers, which carried the buckets to the proper points for dumping. The crane used in this service was also an invaluable aid throughout the entire construction of the bridge, having been in use continually for the handling of form lumber, completed forms, reinforcing steel and other construction materials.

Looking South From Main Street Over the Viaduct Construction Work

The steel centering was maintained in place for 21 days after the key sections were poured, and was then lowered slightly and moved into position for the construction of an adjoining ring. Forms for the spandrel walls and the deck slabs were allowed to remain in place about 14 days, but it was found feasible to remove the forms for other classes of work in a much shorter time.

While every effort was made during the construction of the bridge to complete full sections of concrete between expansion joints at each pouring, this was impossible in some instances owing to the size of the sections. Where such was the case the old surface was first roughened and cleaned of all laitance and loose material, and then coated with a 1:2 grout before the new pouring was begun. In all mass work, special keys were also molded between adjoining surfaces to provide additional bond. In order to afford a smooth, even surface on the concrete, immediately after the forms were removed, all wires used in securing the forms were cut off one inch back from the surface, and the holes were then pointed up with mortar, following which a portion of the exposed surface of the concrete was given a carborundum rub.

Other Work Proceeds as Bridge Is Constructed

The line change at the north end of the new bridge necessitated a heavy side-hill cut and the construction of a high bridge approach fill. This particular work was undertaken as one of the first steps in the new construction so that maximum time would be afforded for the settlement of the embankment.

With all main line traffic being carried over the old river bridge and detoured over a rebuilt industrial siding along the east side of the right of way south of the bridge, all of the work at the south end was carried out without interfering with traffic. Specifically, the work at this end, which was in the main a grade elevation project, involved double-track concrete slab bridges over Water, Main, Princess Anne and Charles streets; embankments connecting the Water and Main street bridges and the Princess Anne and Charles street bridges; and a reinforced concrete viaduct, passing in front of the station building, between Main street and Princess Anne street. South of Charles street, the approach tracks to the new elevated structures are supported on an earth fill confined between mass-type retaining walls, these walls ranging from about 10 ft. in height at the extreme south end to the full height of the Charles Street bridge at the north end. The roadway embankments between Charles and Princess Anne streets and between Main and Water streets are retained on each side by low concrete toe walls.

The Street Bridges and Viaduct

The street subways consist of reinforced concrete track slabs supported on counterfort type abutments at the street lines with intermediate supports consisting of reinforced concrete bents with columns spaced 12 ft. 3 in. center to center. In three of the subways concrete bents are provided at the center-lines of the street and at each curb line, but in the case of the Water street bridge which has a clear width of 51 ft. 4 in. between faces of abutments no supports were provided at the curb lines. The track slabs are flanked on each side by lighter slabs to carry station platforms. At all of the bridges, clear roadways have been provided, 18 ft. wide, each side of the center piers, and the vertical clearance of the deck spans above the street pavements has been made 14 ft. The walkways on either side of all of the crossings range in clear width from 6 ft. 4 in. to 10 ft. 4 in. With this arrangement the slab spans of the Water Street bridge are 25 ft. 8 in., while those over the roadways of the other streets are 22 ft. The slabs for the walkways of the various bridges range in length from 8 ft. 5¾ in. to 11 ft. 11 in.

All of the concrete in these bridges was carried from the mixing plant on the south side of the river to the place where it was to be poured, in two-yard buckets, hauled on narrow-gage cars by a contractor's locomotive. At the point of the work the concrete was elevated into place by a caterpillar-type crane, which also assisted in handling forms and reinforcing bars. In order to enhance their appearance, all of the bridges are surmounted along both faces by massive reinforced concrete balustrades with a rubbed finish, and all of the exposed faces of the bridges themselves have been rubbed with carborundum.

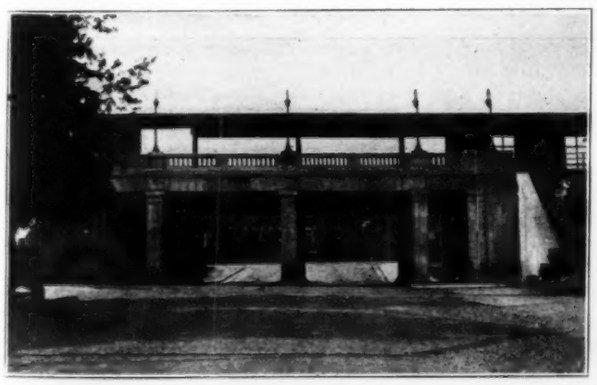
The viaduct extending between the Princess Anne and Main Street bridges is a reinforced concrete structure, similar in many respects to the street bridges in that it consists essentially of a slab deck resting on rows of supporting columns. This type of structure was advisable at this point, rather than an earth embankment, owing to the need for the space east of the tracks, and furthermore, because of the fact that the passenger station at Fredericksburg is located on the ground level, close to the new location of the tracks on the west side, and about midway between Princess Anne and Main streets. This structure was designed to harmonize in every detail with the rest of the work at Fredericks-

burg, and at this point has an advantage over retaining wall construction in that it affords a long and wide open area beneath the tracks for passageways, stairs and ramps, and for many other purposes to which it may be adapted readily at a later date.

Long Passenger Platforms Serve Both Main Line Tracks

With these extensive improvements at Fredericksburg many necessary changes were made in the passenger station facilities, these consisting mainly in the enlarging and modernizing of the station building and the provision of new passenger platforms. In providing for the latter, concrete platforms, 12 ft. wide, were constructed along both sides of the tracks through the full lengths of the elevated structures, from the south end of the river bridge to a point well beyond the Charles Street bridge, a distance of about 1,260 ft. Over the street bridges and the concrete viaduct, these platforms form an integral part of the main structures. Over the earth-filled sections of the track elevation, the platforms, which are six inches thick, rest directly on the graded fill back of concrete curbing along the tracks. Beneath the roadbed, both in the earth fills and over the concrete structure, an adequate system of drainage has been installed to take care of all storm water which may collect. Special features in connection with the station platforms include a small enclosed waiting room along the northbound track, directly opposite the station building, and two baggage and express elevator houses, equipped with electric elevators. One of these is located adjacent to the southbound platform, just south of the station building, while the other is adjacent to the northbound platform at the express and mail building.

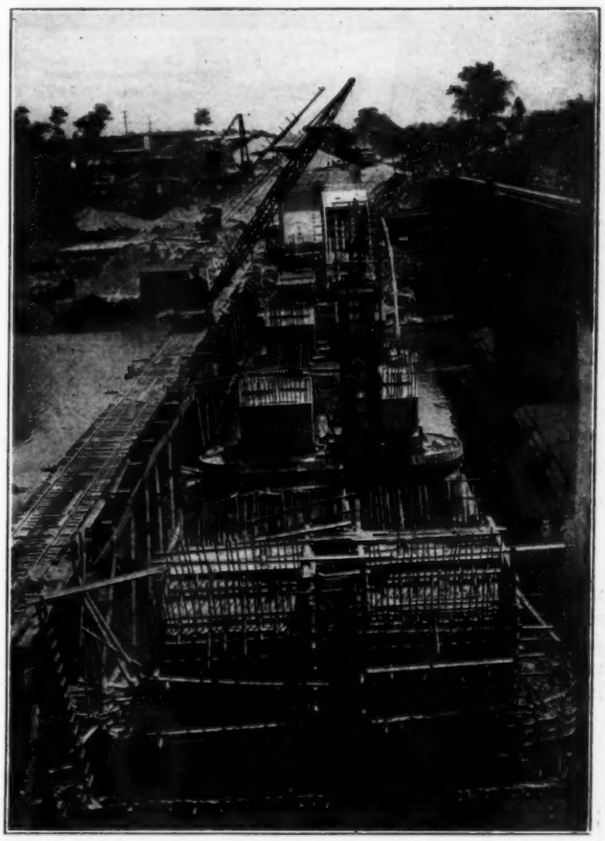
Access to the station platforms on either side, and exit from them, is provided directly opposite the station building in the viaduct section of the elevated structure. Here, on the sides away from the tracks, each platform is provided with a stairway and a ramp on a 10 per cent grade, which lead to a slightly elevated undercrossing of the viaduct, which in turn leads direct to the center of the station building. Like the viaduct itself, both the stairways and the ramps are of concrete construction, the stair treads being slabs of 1:1½:3 concrete in which an integral hardening material was used to give it a hard and impervious wearing surface.



Looking Through the Charles Street Subway

Attractive Canopies Afford Protection to Platforms

Protection for the long elevated station platforms has been afforded through the construction of cantilever-type canopies, that on the east side of the tracks extending from the north building line of Princess Anne street to the south abutment of the river bridge, and that on the west side of the tracks, from the south building line of Main street to the end of the platform south of Charles street. These canopies are constructed of structural steel columns and roof members, with Robertson asbestos-protected metal roofing forms, and with paneled backing of similar material, inset with asbestos-protected metal wire-glazed sash. The only exception to this is directly over the street bridges where the side protection of the canopies has been omitted. The roofing itself is made up of two layers of Celotex, covered with Johns-Manville built-up roofing. The canopies have also been extended over both the ramps and stairways to give them full protection, and between the station building and the viaduct. A special feature of the platforms and canopies is the attractive illumination provided, this consisting of ornamental acorn-shaped, sectional glass globes hung under the canopies at every second panel point, and similar globes mounted on ornamental iron posts at frequent intervals along the platforms where canopies are not provided.



Construction Under Way on the Piers and Arches of the New Bridge. Construction Trestle at the Left and Old Bridge on the Right

Old Passenger Station Is Completely Modernized

The passenger station at Fredericksburg is an attractive small one-story brick structure, and previous to the alterations made in it, was a single rectangular unit, approximately 87 ft. long by 30 ft. wide, with two small central projecting bays, one toward the tracks and the other toward Lafayette street on which the station faces. Within this one unit all of the station facilities were housed, these including separate facilities on each side

of the center of the station for white and colored patrons, in addition to space for handling baggage and mail.

Station Enlarged

For some time this arrangement had not been adequate to meet existing requirements, so in conjunction with the other work being carried out, opportunity was taken to enlarge the station. This consisted of the construction of a low wing at each end of the building, parallel with the main structure, and about 24 ft. long and 26 ft. wide. Both of these extensions were built to harmonize with the station proper, and, as constructed, add much to the appearance of the station building. In utilizing the new area provided, the south wing has been divided into separate rooms for the handling of mail and baggage, while the north wing is separated into four compartments for toilet facilities, a rest room and a smoking room for white patrons. This new arrangement made it possible to remove a number of the old partitions in the main unit of the station and thereby to enlarge the waiting rooms for both white and colored patrons. Supplementing the alterations of the building, the entire interior of the old station was redecorated and has taken on the appearance of a new modern structure. The main white waiting room has been veneered with Aquia sandstone quarried in Stafford County, Va., on Aquia creek, this being the same quarry from which the stone was taken for the first capitol at Washington.

The Enclosed Ramp Leading From the Southbound Platform to the Passenger Station

Summary of Work

Summing up the extensive work carried on by the R. F. & P. at Fredericksburg, it is interesting to note that in all, this work involved a total of approximately 60,000 cu. yd. of excavation for foundations, cuts and embankments; the placing of approximately 30,500 cu. yd. of concrete, in which about 2,500,000 lb. of steel was used; the laying of about 30,000 sq. ft. of concrete pavements and platforms; and the installing of extensive drainage and lighting systems in addition to the long platform canopies and the enlargement and alterations of the passenger station.

All of this work at Fredericksburg was carried out under the general supervision of E. M. Hastings, chief engineer of the R. F. & P., working in co-operation with J. E. Greiner, consulting bridge engineer, Baltimore, Md., who designed all of the structures. The major contractor's on the work were Whiting & Turner, Baltimore, while M. S. McDanel, engineering assistant, and J. C. De Jarnette, Jr., resident engineer, represented the railroad company in the field. All of the track work in connection with the improvements at Fredericksburg was carried out by company forces.

Photo Rudolf Kreutzer

Dresden-Breslau Express, German State Railway, with Pacific Type Locomotive

Do Consolidation Provisions Need Change?

*Baltimore & Ohio executive believes not—Favors four-system plan of grouping in eastern district**

By Daniel Willard
President, Baltimore & Ohio

I AM in favor of the policy of consolidation of railroads as expressed in the Transportation Act of 1920. I do not consider such a policy as experimental or of doubtful utility. Congress, in the Transportation Act, really did nothing more than voice its approval of the policy which had been responsible for bringing into existence such large and efficient railroad systems as the Pennsylvania and New York Central here in the East, the Santa Fe and Southern Pacific in the West. It was evidently believed by Congress that the public interests would be promoted if we had in the United States a comparatively small number of such systems instead of a larger number of smaller and weaker ones. I think Congress was right. The difficulty lies in bringing the proposed changes about.

The law as it now stands places upon the Interstate Commerce Commission the duty of preparing and promulgating a final plan for the consolidation of all the railroads of the country into a limited number of systems. This, in the nature of things, is a difficult task, and although nearly seven years have passed since the law became effective, no final plan has yet been announced. A movement has developed looking to an amendment of the law which would relieve the commission of this duty and permit voluntary consolidations without such a plan.

Amendment Not Necessary or Desirable

I have not felt that such an amendment was necessary or desirable at this time. I have thought, and still think, that if the railway managers and the public officials who are charged with the responsibility would cooperate in a real and sympathetic effort to bring about what Congress clearly had in mind and has expressed in the Transportation Act, that consolidation such as contemplated in the act could be accomplished without the need of additional legislation.

I believe that consolidation of the kind proposed is economically sound and ought to be had in the public interest, and I also believe that if it is not brought about in some such way as I have suggested, that Congress may very likely take steps to secure it in some other way and possibly with less satisfactory results than might now be achieved.

With the view of assisting the commission in the development of a plan which would at least aid in the solution of the situation in the eastern district, the representatives of the four major trunkline systems, during the summer of 1924, gave consideration to this matter in an effort to work out a consolidation plan for the eastern district which should so allocate the roads therein as to form four well-balanced systems.

It was apparent that if the four-system plan were adopted, three of the four systems would have to be built around the Pennsylvania, the New York Central and the Baltimore & Ohio, and in view of the emergency at about that time of the proposal to combine the Nickel Plate, Erie, Chesapeake & Ohio, Hocking Valley and Pere Marquette, it seemed that such lines would furnish the nucleus of the fourth system in a four-system plan.

As a result of these conferences in 1924, there was developed the so-called four-system plan for the eastern district which was informally submitted to the commission by its sponsors, the Nickel Plate, New York Central and Baltimore & Ohio, on January 26, 1925. The representatives of the Pennsylvania stated that they were not prepared to acquiesce in such a four-system grouping as was proposed, and filed with the commission a statement of their objections and suggestions.

Advantages of Four-System Plan

Some of the general advantages which might be expected to flow from a properly allocated four-system plan in the eastern district appeared to be as follows:

(a) Nearly all of the principal producing and consuming centers of the territory would be served by at least two of the systems, and some by three or more.

(b) Each of the systems as suggested would be ramified throughout the territory and in a position to contribute to a widespread distribution of the traffic of that region.

(c) Each of the systems would have access to the sources of fuel supply and would also participate to a large extent in the commercial distribution of coal.

(d) Each of the systems would have access to the lower lake ports and thus participate in the transportation of the large volume of coal, ore and grain traffic passing through those gateways.

(e) Mileage, property investment, gross earnings and resulting net railway operating income with four systems would be more nearly equalized than would be possible in the case of a larger number of systems.

(f) The systems would, generally speaking, have substantial equality of opportunity to secure traffic and serve the public throughout the region involved.

(g) A greater amount of actual and effective competition in service may be assured by four systems all well articulated than by a greater number of systems more or less incomplete.

The total length of the roads embraced in the four-system plan, as proposed, is about 56,000 miles, and nearly, if not quite, one-half of all that mileage is now or will be included in the Pennsylvania and New York Central.

It follows, of course, that if more than two systems are built out of the remaining half, they must be proportionately shorter with fewer ramifications, and probably weaker than the Pennsylvania and New York Central.

If we are to have consolidation of railroads as a governmental policy, then I want to see the Baltimore & Ohio continue relatively just as strong under the new conditions as it is now under existing conditions, and it seems to me that the public interests, and more specifically the interests of Baltimore, will be best promoted by such an arrangement.

This is why I am in favor of a four-system grouping

*Excerpts from an address made at the dinner tendered to Mr. Willard by Baltimore citizens at Baltimore, Md., on November 21, 1927, incident to the recent centenary exhibition and pageant of the railroad.

in the Eastern Region, and why I am opposed to any other arrangement which would in effect leave the Pennsylvania and New York Central as strong or stronger than they are today, while the Baltimore & Ohio would be relatively weaker.

Interest in Western Maryland

Some months ago, as is generally known, the Baltimore & Ohio purchased a substantial holding in Western Maryland stock. The reasons for our action have been fully explained. The question naturally arises—should the Baltimore & Ohio and the Western Maryland be put together? I think they should, because I believe such an arrangement to be economically sound and in the public interest. I have frequently stated before the Interstate Commerce Commission and elsewhere that I did not consider the Western Maryland vitally necessary to the Baltimore & Ohio; nevertheless, I think such a combination economically desirable in the public interest. I have also said that we of the Baltimore & Ohio would not desire to take over that property in the face of a strong feeling of opposition on the part of the citizens of this city and state. Whether the Baltimore & Ohio is permitted to acquire the Western Maryland or not is of itself relatively unimportant so far as the Baltimore & Ohio is concerned, but it is of prime importance that the Baltimore & Ohio, in any plan of consolidation, should be so strengthened and rounded out that it can compete on a reasonable parity with the other large systems in the same region, and thus be able to give to Baltimore the same effective support and cooperation which the northern cities now receive from the Pennsylvania and the New York Central Lines.

Effect on Baltimore & Ohio

It should be borne in mind that the Pennsylvania and New York Central will be substantially the same after consolidation as now, whether there be four, five or six groups in the Eastern Region. With four groups the Baltimore & Ohio will approach the Pennsylvania and New York Central in mileage and opportunity, but not in earnings. With five or more groups the Baltimore & Ohio would be relatively weaker than it is today when compared with the two great systems just mentioned. We are interested in the Western Maryland chiefly as it affects the larger aspect of grouping which I have just been discussing.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading during the week ended November 19 amounted to 968,103 cars, a decrease of 103,604 cars under the corresponding week of last year and of 89,820 cars as compared with 1925. Loadings of grain and grain products and of live stock were heavier than a year ago but these were the only commodity classifications which showed an increase. Coal loading declined 56,684 cars and ore 14,799 cars from last year's totals. Loadings in all districts were smaller. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

WEEK ENDED SATURDAY, NOVEMBER 19, 1927

Districts	1927	1926	1925
Eastern	219,798	245,993	236,132
Allegheny	193,685	223,310	211,060
Pocahontas	52,229	59,867	58,570
Southern	149,997	161,239	157,611
Northwestern	120,270	131,364	140,202
Central Western	151,750	159,773	164,937
Southwestern	80,374	90,161	89,411
Total Western Districts	352,394	381,298	394,550
Total All Roads	968,103	1,071,707	1,057,923
Commodities			
Grain and Grain Products	46,341	42,685	53,212
Live Stock	35,027	33,713	35,780
Coal	186,330	243,014	188,868
Coke	9,297	12,722	15,207
Forest Products	59,499	65,794	68,277
Ore	12,813	27,612	31,704
Mdse. L. C. L.	260,319	264,442	268,803
Miscellaneous	358,477	381,725	396,072
November 19	968,103	1,071,707	1,057,923
November 12	974,862	1,106,889	1,049,940
November 5	1,038,852	1,131,832	1,062,646
October 29	1,112,621	1,208,878	1,091,154
October 22	1,128,486	1,200,941	1,120,677
Cumulative total	47,441,242	48,412,144	46,600,612

The summary of freight car loadings for the week ended November 12 was as follows:

Revenue Freight Car Loading

WEEK ENDED SATURDAY, NOVEMBER 12, 1927

Districts	1927	1926	1925
Eastern	211,425	248,696	234,848
Allegheny	193,295	231,571	203,845
Pocahontas	51,694	64,620	59,621
Southern	151,406	161,601	153,715
Northwestern	130,841	148,019	154,420
Central Western	153,209	163,856	161,028
Southwestern	82,992	88,526	82,463
Total Western Districts	367,042	400,401	397,911
Total All Roads	974,862	1,106,889	1,049,940
Commodities			
Grain and Grain Products	45,005	44,602	46,797
Live Stock	36,316	38,160	36,860
Coal	171,560	241,942	186,409
Coke	8,900	12,957	15,702
Forest Products	62,665	67,457	67,004
Ore	18,598	37,850	41,348
Mdse. L. C. L.	258,907	266,049	267,676
Miscellaneous	372,911	397,872	388,144
November 12	974,862	1,106,889	1,049,940
November 5	1,038,852	1,131,832	1,062,646
October 29	1,112,621	1,208,878	1,091,154
October 22	1,128,486	1,200,941	1,120,677
October 15	1,119,872	1,202,780	1,106,009
Cumulative total, 46 weeks	46,473,139	47,340,437	45,542,689

The freight car surplus for the period ended November 15 averaged 251,644, as compared with 207,757 cars November 8. The total included 116,551 box cars, 100,465 coal cars, 16,704 stock cars, and 7,339 refrigerator cars.

Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended November 19 totalled 77,420 cars, an increase of 900 cars over the previous week, and a decrease of 1,491 cars from the same week last year.

	Total for Canada			Cumulative Totals to Date	
	Nov. 19	Nov. 12	Nov. 20		
Commodities	1927	1927	1926	1927	1926
Grain and Grain Products	21,390	22,370	21,034	428,941	434,930
Live Stock	4,348	3,950	3,239	108,277	103,732
Coal	8,182	8,449	9,541	321,193	281,090
Coke	488	567	536	16,643	17,436
Lumber	2,781	3,039	3,368	172,821	168,142
Pulpwood	1,003	1,214	1,181	133,844	117,732
Pulp and Paper	2,450	2,342	2,319	101,988	109,459
Other Forest Products	2,749	3,935	2,713	139,690	141,698
Ore	2,058	2,101	1,675	79,171	81,328
Merchandise, l. c. l.	17,540	14,915	17,894	792,807	757,688
Miscellaneous	14,431	14,638	15,411	696,120	666,541
Total Cars Loaded	77,420	76,520	78,911	2,991,495	2,879,776
Total Cars received from Connections	33,029	31,742	38,232	1,725,595	1,723,485

Depreciation Hearing Adjourned to January

WASHINGTON, D. C.

THE presentation on behalf of the President Conference Committee of criticisms of the plan of depreciation accounting proposed by the Interstate Commerce Commission in its depreciation order, at the hearing before Commissioner Eastman and Examiner Bunten, was concluded on November 29 and an adjournment was taken to some time in January to be announced later. At that time consideration will be given to the depreciation order for telephone companies, to additional evidence on behalf of the railroads, and to cross-examination of J. W. Roberts, who presented a plan on behalf of the National Industrial Traffic League, and of the railroad witnesses who have testified.

L. A. Downs, president of the Illinois Central, testified on November 23 that in his opinion the order, if put into effect, will affect the railroads adversely, and is based on a fundamental misconception of the correct theory of depreciation. He held the view, he said, that a railroad property cannot be said to be depreciated if there is no deferred maintenance. An abstract of Mr. Downs' statement follows:

As I see it, the order will be productive of no substantial benefit; will seriously impair the credit of many railroads and interfere with their ability to secure new capital, thereby reducing their ability to give that service to the public which the increasing commerce of the country demands.

I hold the view, with which the commission is familiar, that a railroad property cannot be said to be depreciated if there is no deferred maintenance. In my opinion the property of the Illinois Central System ought not to be considered as depreciated in value unless it is in a condition in which additional money must be spent to bring it up to a state of operating efficiency. If, taking our properties as a whole, they are functioning to what may be called 100 per cent efficiency, and if in the exercise of sound judgment no deferred maintenance exists, then I do not see how the properties can be considered as being depreciated. Therefore, I do not think that there should be forced upon us a system of accounting, the effect of which would be to compel us, at least inferentially, to admit that there has been a loss in value measured by a presumptive so-called expired service life of the units of property.

I find in the report language which makes it clear to me that the commission's whole idea is based upon the view that our property is depreciated merely because the rails, ties, spikes, cars, locomotives, bridges and other units of property are not brand new.

Looking at the problem from a practical viewpoint, the value of a well-maintained, old railroad can be compared favorably with that of a new railroad. Personally, I think there can be no question that a thoroughly seasoned railroad is more valuable than a new railroad, provided, of course, there has been spent upon the old railroad sums for maintenance which are adequate to keep it in an efficient condition. I believe this is generally admitted.

I am informed that the depreciation stated by the commission in the various valuation proceedings amounts on the average to more than 20 per cent. On the Illinois Central, which is one of the older railroads of the country, the tentative valuation as of 1915, excluding the Gulf & Ship Island, shows a depreciation of nearly $81,500,000, or slightly in excess of 22½ per cent. I am very sure that the Illinois Central is not worth 22½ per cent less than it was when the railroad was first built. I am quite sure that it is worth a good deal more than when the road was first constructed, or than if it were brand new. I am opposed to any system of accounting which will require the Illinois Central to show by its books that the property has been depreciated more than 20 per cent in value.

Past Accrued Depreciation

The commission proposes to use the straight-line method of calculation, which assumes that value is to be measured by the expired service life of particular units. This theory is unsound when applied to values and is, therefore, detrimental to our property. In this connection, I mention as one of the most important features the requirement in the report which is expressed in the 13th finding. That finding requires the railroads as of the date when the order goes into effect to estimate past accrued depreciation, calculated according to the straight-line method, and credit the amount of such depreciation to the depreciation reserve. As I understand it, the practical effect of the order will be that substantially 20 per cent of our book value in roadway and equipment will be credited to the depreciation reserve and ultimately charged to profit and loss. The report itself recognizes the face that the effect may be to convert a profit and loss surplus into a deficit, with consequent impairment of credit, unless this disastrous result is prevented by the charge to the suspense account on the asset side of our ledger, a matter to which I will refer later. In other words, whereas a road like the Illinois Central System at the close of the year 1926, as shown by its general balance sheet, had a corporate surplus of about $94,000,000 (exclusive of the effect of extraordinary repairs), this surplus would be practically wiped out at a stroke of the pen.

The (inferentially) proposed treatment of extraordinary repairs *may* result in a larger deficit sufficient to impair our ability to borrow funds in the future. It is impossible for me to view such a result without the gravest alarm.

My apprehensions in this respect are by no means quieted by that portion of the order which permits the carriers to charge the amount of accrued depreciation to a suspense account on the asset side of the balance sheet. This temporary expedient will not cure the difficulty. As I see it, the commission will have, in effect, determined that the investment in the property has been impaired to the amount of the so-called accrued depreciation calculated on the straight-line basis. The carrier is required to make an entry which has the effect of reducing the book value by this 20 per cent. It is proposed to carry this figure in suspense, the inference being that ultimately it will be absorbed by charges to profit and loss. The placing of this entry on the asset side is a mere matter of bookkeeping. It will prevent the surplus from being wiped out as an item in the balance sheet, but the placing of this entry on the asset side seems to me to be a gesture which will deceive nobody. The books will undoubtedly show that the company's assets have been authoritatively depleted through an order of the Interstate Commerce Commission by the amount of the so-called accrued depreciation, and I do not see how this fact will be changed by a suspense account which has no real significance. That entry will not restore the presumed loss in book value. I think it is a very serious procedure, particularly in view of legislation in many states regulating the character of securities which may be purchased by savings banks and insurance companies for investment purposes. I doubt if the securities of a railroad company whose balance sheet has thus been readjusted with an inferential large deficit in profit and loss, will be considered as lawful investments for savings banks, insurance companies and other investment companies subject to these laws. Furthermore, such railroad companies may be prevented from declaring dividends out of surplus which the commission says does not exist. This will be true, particularly in lean years when earnings are relatively light. Perhaps I am justified in saying that this feature of the order dealing with the financial statement is the most serious aspect of the matter.

This requirement seems to me to be altogether unjust and unnecessary. It takes on the aspect of changing the rules in the middle of the game. The structural property of the I. C. other than equipment has been maintained all these years through the retirement method and all the transactions of the company have been regulated with reference to that method. No depreciation reserve has been accumulated and operating expenses have not been charged with amounts calculated according to the theory which is now ordered to be adopted. That is to say, we have gone along making certain charges to operating expenses, declaring dividends and making certain charges to profit and loss, without any notice that the commission would suddenly change the plan and require us to set up this huge depreciation reserve. Nothing can be more objectionable than to make retroactive a drastic requirement of this kind. No business should be expected to absorb such a shock. The effect of the order is to declare that the amounts charged to operating expenses in the past have been altogether inadequate. The carrier is required to rewrite its accounts and to charge huge sums indirectly to operating expenses on a theory radically different from that which prevailed when the original entries were made. As I see it, the commission has now declared that the surplus which a railroad has accumulated under a system approved by the commission should not have been accumulated, and this surplus is wiped out on the theory that the amounts shown as surplus should really have been absorbed in operating expenses in the form of depreciation accruals. As a matter of fact, the amounts charged to operating expenses, certainly on the railroad which I represent, have been sufficient to maintain the property in a condition which is thoroughly efficient, and it

comes as a most disturbing shock to be told now that these amounts were inadequate and that the whole financial structure must be rearranged in order to take care of an assumed wastage of assets which is purely theoretical.

I see no necessity whatever for any action which would reduce or destroy our surplus. When the commission many years ago made mandatory its requirement for setting up replacement accounts for equipment (subsequently termed depreciation) the carriers were not required to ascertain the so-called consumed service life on equipment and credit a reserve with this amount. If there was no necessity for this drastic action in the case of equipment, I see no reason why it is now considered necessary in the case of the roadway accounts. It seems to me that the evil which will follow the adoption of this policy is far greater than any possible good which may result from this feature of the order.

Maintenance Expenditures Partly Depend on Revenues

A railroad must run its business with some regard to its revenues. In this respect expenditures made for maintenance in the case of a railroad company must be regulated to the extent of the amount of money available for that purpose. The railroad business is not different in this respect from any other business. Of course, I recognize the fact that a railroad company must keep its property in a good condition of repair so that its efficiency will be maintained, but every experienced railroad man knows that in times of light traffic, when business is poor, consideration must be given to this fact in making his plans. The commission seems to think that it is poor policy to retrench expenditures in lean years, but no other policy is possible with due regard for ordinary business judgment. As a matter of fact, there is less need for maintenance expenditures at a time when business is light and the wear and tear upon the plant is relatively small. Undoubtedly there are projects which can be postponed in times of light traffic without impairing, in the least manner, the ability of the railroad to render good service. At times when revenue is plentiful, due to business conditions, these improvements may be made which would be unjustified and unwarranted unless funds were available.

As I have said, there are certain expenditures which must be made. I refer to such expenditures as are necessary to keep the railroad in a good operating condition so that trains may be safely run and efficiently maintained. But it seems to me it is poor economy and represents the exercise of poor judgment to spend as much in maintenance when revenues will not justify it as in the years when revenues are plentiful. If in times of poor business replacements can be deferred for a time without harm to the safety and efficiency of operation, such replacements should be postponed. If a station building, for instance, is approaching the period of retirement, but is in a condition in which it may be used for another year or two, I think it is folly not to defer the improvement until the period when revenues are such as to afford funds for the replacement without embarrassment. A deferment of this character does not affect materially the efficiency of operation. I am entirely of the opinion that insofar as the order requires maintenance expenditures to be made without regard to revenue, the theory is uneconomical, unsound and contrary to every reasonable business practice.

Extraordinary Repairs

There are other matters which I might mention, such as the uncertainty as to the meaning and application of the term "extraordinary repairs"; the necessary abandonment of the practice of charging to operating expenses the cost of replacing in kind property paid for many years ago on the pre-war basis of prices now replaced on a higher basis; the undue extension of charges to capital with a consequent increase in capital account due to present costs as compared with pre-war costs; the cumbersome machinery which must be set up and maintained to comply with the order, and other matters which have no doubt been called to the commission's attention by witnesses who have dealt in greater detail with the special engineering and accounting features. I have dealt here only with certain obvious objections which seem to me to be fundamental. I do not think the commission should force upon the Illinois Central a theory of depreciation which I understand has not had the approval of the Supreme Court of the United States. Doubtless in due course the question will be presented for decision. The carriers earnestly contend that depreciation is to be ascertained by inspecting the property and making an estimate of the amount of money which should be spent upon it to place it in a condition of complete efficiency. Pending a decision by the highest court in the land upon this very important question, it does not seem to me that the commission under the guise of an accounting order should require the carriers to surrender their views and adopt a theory which they believe to be unsound, the effect of which will be to impair the investment and seriously affect railroad credit. The making of an order of this kind might well be deferred until the highest court in the land has settled the much-debated question of what is the true basis for calculating depreciation.

We see in this order an unnecessary interference with managerial functions. I think I may safely say that while all of us recognize the necessity for regulation, yet regulation has gone far enough. There should be some latitude allowed in the handling of the business and finances of the carrier. As I see it, putting into effect this order will seriously interfere with, if it does not destroy, the budgeting system which is in effect on the Illinois Central, as it is upon many other railroads in the country. Recognizing the fact that the tendency of modern business is toward the adoption of budget systems, we have regulated our expenditures on the Illinois Central for many years by making careful estimates of our revenues and careful estimates of our expenditures. The effect of this order will be to render this work ineffective and to introduce lax and wasteful methods in the place of our present carefully worked out system.

Testimony as to various aspects of the order also was given by E. M. Thomas, comptroller of the Chesapeake & Ohio; G. C. Hand, vice-president of the Kansas City Southern; H. L. Ripley, valuation engineer of the New York, New Haven & Hartford; W. H. Courtenay, chief engineer of the Louisville & Nashville; J. E. Willoughby, chief engineer of the Atlantic Coast Line, and J. R. Leighty, special valuation engineer of the Southern.

J. J. Ekin, comptroller of the Baltimore & Ohio, who had made the opening statement in behalf of the committee, also made a supplemental closing statement in which he said that the requirement of the order as to past accrued depreciation taken in connection with other phases of the order, would require a large amount of depreciation to be charged to the profit and loss accounts twice. Two methods of accounting have been in effect as prescribed by the commission, he said, first, a renewal basis, chargeable to operating expenses for track structure, and second, a unit retirement basis for equipment. Now, through this order, the track structure is separated into the various elements such as ties, rails, etc., and is to be accounted for under the unit retirement method. Mr. Ekin said, in part:

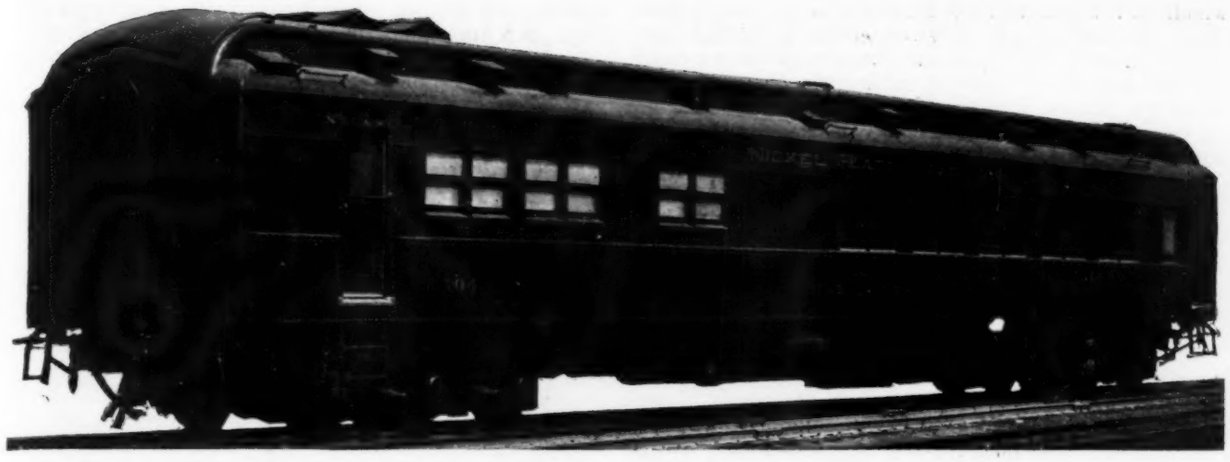
When ties and other elements of the composite track structure are considered, the order of the commission not only scales down the value in case of a minus or clearly inadequate sum for non-depreciable items, including grading, but requires the setting up of so-called past accrued depreciation on a service life basis, charging a suspense account on the balance sheet to be charged to profit and loss as authorized by the commission for ties in place, two-thirds of the cost of which at time of renewal, as in illustration, had already reduced profit and loss through charges to operating expenses of the cost of the ties when renewed.

In the order the commission has made only a partial adjustment, and that against the carriers, the effect of the order as drawn being to charge profit and loss twice for a large proportion of the cost of rails, ties, ballast and other track material applied in renewals during the era of increased costs charged direct to operating expenses.

If the commission decides to enforce the theory of stating in the balance sheet the so-called past accrued depreciation, then to have a proper basis for such a calculation the total investment account should reflect the true cost of the property; in fact, the order itself provides that after it becomes effective the actual cost shall be written into the investment account. It naturally follows that when any such system, as proposed, is put into effect, the then correct cost should be used as a base.

I am confident that when the commission makes a further inquiry into the subject of rails, ties, ballast, and other track material, which have been handled up to the present time on a renewal basis, it will see the injustice of the order and the proposed accounting.

From the examples cited it is evident that if depreciation is to be currently accrued on road property there will be a duplication of charges to operating expenses or to profit and loss whether or not accrued depreciation is set up in the accounts *unless suitable adjustment of the investment account is made as has been described.*



Exterior View of One of Two New Dining Cars Recently Purchased by the N. Y. C. & St. L.

Nickel Plate Buys Two Dining Cars

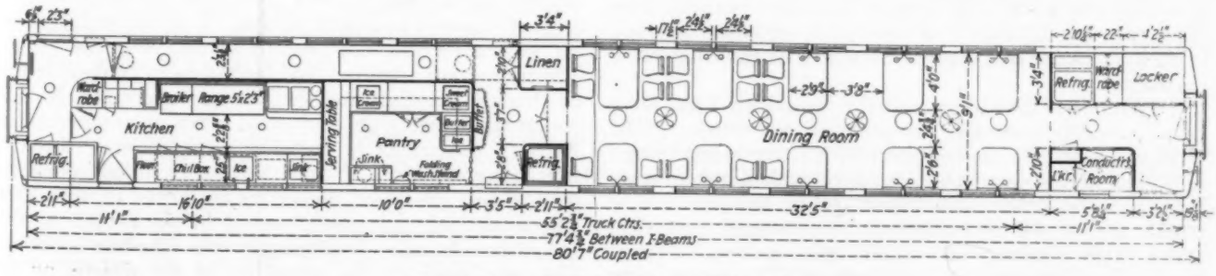
A 30-seat capacity car with unusually roomy kitchen—The trucks have roller bearings

THE New York, Chicago & St. Louis has recently placed in service, between Chicago and Cleveland, two dining cars of all-steel construction, built by the Pullman Car & Manufacturing Corporation, Chicago. By referring to the floor plan of the car it will be noticed that the kitchen and pantry sections are much roomier than is ordinarily the case in 30-seat capacity cars. This feature was insisted upon by the railroad company in the belief that added room in these sections would speed up the service and permit the serving of a greater number of guests within a given time.

The length over the end sills of these cars is 77 ft. 4¾ in., with an inside width of 9 ft. 1 in. The dining room section takes up 32 ft. 5 in. of the inside length and the kitchen and pantry together are 26 ft. 10 in. long. The dining room has 10 tables; five, which are 2 ft. 9 in. by 4 ft., each accommodate four persons, while the opposite five tables, which are 2 ft. 9 in. by 2 ft. 6 in., each accommodate two persons. There is a clear space of 3 ft. 8 in. between tables and an aisle width of 2 ft. 4¾ in. Each table is located centrally with relation to double windows, which provides a wide range of view for each diner.

The cars are of the Pullman wide clere story design. The dining room is finished in light walnut with an ivory ceiling, and the color lines and ornamental figures in harmonizing tints give the dining room a beautiful appearance. The kitchen and pantry are finished in French gray. These two sections have the tables, refrigerators, pastry cabinets, etc. faced and covered with Monel metal,

The Interior of the Dining Room Presents a Pleasing Appearance

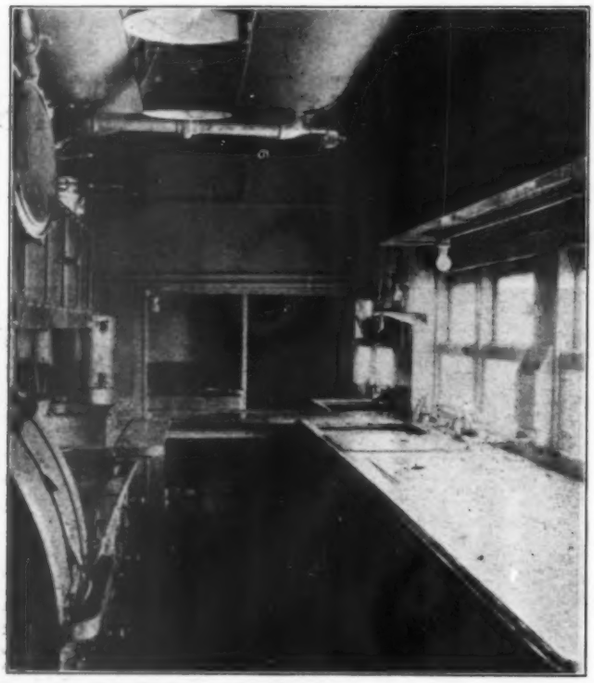


Floor Plan of Nickel Plate Dining Car

which provides an attractive finish that is easily kept clean. The dining room floor is covered with a rug harmonizing with the interior finish and the passageways have a pleasing tan and blue checkered rubber tile covering. The windows, shades, chair upholstering and hardware are of patterns and colors which harmonize with the general interior design and color combinations.

Into the end of the car opposite the kitchen spacious lockers have been built on one side, including a beverage refrigerator and cigar humidor. On the opposite side is located a conductor's room and passengers' wash room. At the opposite end of the aisle a buffet is located with silver lockers beneath and a large mirror above.

The lighting arrangement consists of center light fixtures with large frosted bowls hanging from the ceiling, together with a two-light candle bracket with micanite shade, located on the side wall over the center of each table. Located between the ceiling light fixtures are the diffusing type fans which produce desirable ventila-



Looking Through the Kitchen Into the Pantry

tion, and at the same time avoid a direct draft on the passengers. The car is ventilated by deck type ventilators of which six are in the dining room and three in the kitchen. The kitchen also has two roof trap ventilators. A single-speed 12-in. bracket fan is placed in the pantry and, in addition, there are four side deck exhaust fans—three in the kitchen and one in the pantry. The arrangement of exhaust fans is designed to prevent smoke or cooking odors from leaving the kitchen. The porcelain enamel refrigerators which have been used in these cars are arranged for outside icing from the roof in such a manner that cinders cannot enter the icing compartments.

Two of these cars were built for the Nickel Plate alike in all respects with the exception of the trucks. The trucks of both cars are equipped with roller journal bearings, one of the cars being equipped with Timken bearings and the other with Hyatt roller bearings. The trucks are of the six-wheel Commonwealth cast steel frame type having a center pin locking device, inside side bearings and clasp brakes. The underframe is of the Pullman standard built-up fish belly type with center sills 30 in. deep, used with Commonwealth cast steel end sills. The superstructure is of Pullman standard all steel construction, in the framing of which copper bearing steel has been utilized.

Train Accidents in July

THE reports of investigations of individual train accidents which have been issued by the Interstate Commerce Commission for the month of July, 1927, cover one derailment and two collisions, as follows:

Southern, Gilkey, N. C., July 2.—Northbound freight train No. 68, moving at an "undetermined rate of speed" was derailed and the engineman, fireman, conductor and two brakemen were killed, leaving the flagman the only survivor. The locomotive was overturned and a dozen cars were piled up in a distance of 200 ft. The track was found to be well maintained and the locomotive showed no evidence of having been defective or out of order; the conclusion is that the derailment was due to excessive speed.

Vulcan, Ohio, July 12.—At a complicated crossing, an electric car of the Toledo & Indiana (westbound passenger train No. 23) was run into by some freight cars of the Toledo, Angola & Western and was overturned and wrecked; three passengers killed and nine injured. All speeds are low over this crossing (in which three roads are involved) and the collision is held to have been due primarily to the failure of the motorman of No. 23 to ascertain definitely that the way was clear; but a crossing flagman also is at fault for not affording protection. Further, the men in charge of the freight cars had ignored the rule requiring a stop before proceeding over the crossing. The main recommendation of the report is that the regulations requiring all movements over the crossing to be protected by flag, be made more effective; and, further, the inspector believes that the installation of interlocking would be warranted. The officers of both roads are held to have been lax in the instruction of trainmen with regard to the operation of trains. Long-standing practices were found to be contrary to printed rules which ostensibly were in effect.

Oklahoma Railway, Shell Creek, Okla., July 19.—Westbound passenger train No. 25, consisting of a single motor car, ran past the switch at which it should have waited for eastbound train No. 26, consisting of a single motor car, and collided with it while traveling at about 15 miles an hour, the other car also moving at about the same speed. The motorman of Train 26 was killed and 20 passengers and 3 employees were injured. The motorman and conductor of No. 25 are held responsible for the collision. The conductor claimed that he had not overlooked the meet with No. 26 but said that his train was running fast and had gone further than he thought; that he did not hear any meeting-point whistle signal and did not ascertain his location until after the switch had been passed. Even after he passed the switch he was not prompt in applying the brakes. The motorman admitted that he had been confused; that he thought for the time that he was operating No. 27, which train meets an eastbound train at another place. Both of the trains in collision were running three or four minutes ahead of time, and an examination of the train sheets disclosed numerous instances of this kind. The report calls for prompt action by the proper officials to see that the rule of adhering to the schedule is obeyed. The rule requiring the sounding of the whistle on approaching meeting points is criticized as inadequate.

Wabash Conducts Supply Work on Retail Plan

Accounting troubles reduced and time saved by pricing materials at counter

The New and Old Way

By H. C. Stevens
General Storekeeper, Wabash

THE extent to which inaccurate pricing of materials affects the difference between materials and supplies book balances and the value as computed from annual physical inventories is seldom given the consideration that its importance warrants, although it is doubtful if any other one factor of material accounting on the average railroad has a greater bearing on the outcome of a year's transactions, representing the performance between inventories, as prescribed by the Interstate Commerce Commission.

There are only two ways in which it is possible to insure that each item of materials and supplies will be charged as issued at exactly its cost. One is to compute and mark the price on each article. This is generally believed to be unduly expensive. The other is to keep a debit and credit record on each item, by charging at a given price the number of units of any article secured at that unit cost, but this method also entails considerable expense when applied to the many thousands of items handled by the average Class I railroad. It is theoretically good, but generally fails in practice. The erroneous interpretation by bookkeepers of descriptions on bills and requisitions with the consequent debiting or crediting of the wrong items, also the failure of persons filling requisitions to show correct sizes and descriptons of items furnished from stock, particularly where something different from that originally stipulated is supplied, cause many discrepancies.

Price Bureaus Not Adequate

The majority of railroads have a central pricing bureau to determine the cost prices and to mark them in specially ruled books or on visible cards and then pass all requisitions covering the issues through this bureau for the application of the prices. On miscellaneous manufactured articles, the last cost price is generally used by these bureaus. On castings, lumber, bar iron and raw materials, items where considerable quantities are handled continually, average prices are used. These average prices are obtained periodically from the accumulated costs of quantities purchased during set periods. They are usually applied during an equal period, on the theory that approximately the same quantity is issued that is received during any period. This method, however, does not remove the troubles under the ledger system from mistaking the items actually issued.

Since railroads buy material for their own use there may be no actual gain or loss to the corporation by variations below or above the actual cost when the charges are made to the work in which the article is used, but the large adjustments in the form of credits or debits at the close of a year in connection with material are evils which should not be treated lightly under the present day exacting requirements of railroad management. They are inconsistent with efficient operation, and warrant a more careful consideration of the first mentioned method of pricing than this method has received.

Bin Pricing Grows in Favor

During the last 10 years many railroads have adopted the section stock clerk plan method of operating stores, a method which is similar to the department manager plan that has proven so successful in large retail and wholesale stores and the roads have found it to be the most practicable way of handling railway materials and supplies.

Where this plan is in effect the problem of computing and marking the price on each article is not as difficult as it may seem. A few roads have recently adopted it and report a decided improvement over the results secured under the central pricing bureau method. The prices to be used are applied to labels on the bins or stenciled on the article where the size of the article makes this desirable. The man on the ground, who knows the

material and actually issues or ships it, is the person who prices the document. This method is fundamentally sound, and with the ever increasing support of executives for more efficient and accurate stores accounting, its use is certain to become more general.

A recent canvas of 44 representative Class I railroads to determine the methods generally used showed that 9 were using the last purchase price only, when charging materials issued from stock. Three roads were using an

Inside the Decatur Storehouse Where All Requisitions Are Priced at the Bins

average price on everything. A total of 32 were using the last price for miscellaneous items and an average price on such articles as cast car wheels, flues, lumber, and castings of each general description, such as grey iron, steel and malleable parts. Some were holding purchase invoices until foreign line freight charges were secured, while others were computing the prices without this cost being included in the price of the article.

Stock Men Price on Wabash

On the Wabash, price books, according to the American Railway Association's material classification, are maintained at each division store. They include every article carried in stock, whether common or special, and show the stock item number and the description.

Shipper's invoices with the cost of foreign line freight and all other charges, store department transfer bills, and completed store department orders on shops, are passed through the price bureau currently for the purpose of checking the unit prices and for recording new prices where the changes demand it. A new price in each instance is recorded in the column for the month in which the changes took place and on the line alloted for the year concerned. Prices on purchased articles are listed in blue ink and all other prices in red ink.

An exception to this practice is made in the case of some classes of articles, such as air brake material, stoker parts, electric headlight parts, etc., where the catalogues from the manufacturers are used in pricing these articles, thus eliminating the expense of transferring them to the price books. The same is true of mounted wheels which are covered by a special price list issued from the general storekeeper's office.

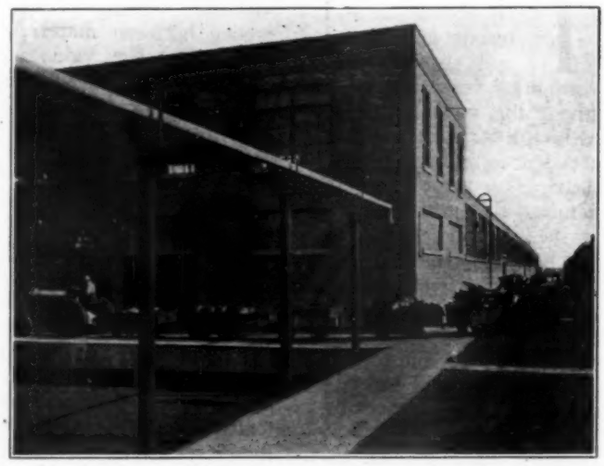
In compiling the price book, the last price is used on the major portion of the stock, while average prices, determined from the purchases over a six months' period, are used in the following instances:

Treated pine piling,
Untreated pine piling
Oak piling
Couplers
Elliptic and coil springs
Rough grey iron castings
Rough malleable castings
Steel angles and channels
Bolt and bar iron
Structural rivets

The unit price is used wherever this can be done. Second-hand serviceable items are accepted at the full price of new material and re-issued on this basis with a few exceptions such as cast car wheels, axles, driving tires, flues, grain doors and lumber, where the second-hand article is not positively equal in service to a new article.

Before leaving the price book, it might be interesting to state that a detail price list, covering the majority of articles used in additions and betterment work, is prepared each year by the stores department and issued to other departments. These are returned at the end of each quarter for price revisions. Their purpose is to assist the engineers and accountants in figuring prices for estimates, checking AFE prices, etc., thus eliminating considerable correspondence with the price bureau regarding the prices to be used or charged in connection with additions and betterment work.

The current prices of materials are obtained from the price book and posted on the cards and labels at each bin which describe the material, except where the price is to be stenciled on the material itself. These descriptive labels are prepared by the price bureau, and at main stores; the pricing bureau also revises the prices by replacing the old labels with new ones. At the local stores the prices are taken from the bills received and are applied to the bin label by the local store forces. When material is issued from stock the prices of the



The General Storehouse of the Wabash at Decatur, Ill., Where Materials Are Handled from Cars to Bins by Tractors and Trailers

material actually issued are then attached to the requisition by the section stockkeeper.

Under some pricing methods much delay occurs in arriving at the total prices to be used on account of the difficulty of getting the final charges for foreign line freight. This has been eliminated on the Wabash by having agents at junctions take up all company material shipments reaching them from off the line, make an interline settlement of the foreign line portion of the freight and rebill the shipment to destination dead head with the foreign line freight charged against the destination point as an advance charge. Since this gives the freight line with the receipts of the waybill or freight bill, the only possible change in the foreign freight is in the final

revision of the freight charges by the auditor of freight accounts. These changes are too slight and infrequent to justify holding the pricing work or making deductions from invoices of shippers for freight where the materials are purchased f. o. b. to other than shipping stations and forwarded by these stations without the pre-payment of freight charges.

A 40 Per Cent Saving in Time

Bin pricing was started on the Wabash early in 1924 and its application has been gradually extended until at present its use is almost complete. During that time a gradual but constant reduction has taken place in the differences between the inventory values of material and the book balances and no doubt is felt but that the bin pricing practices have been a considerable factor in this improvement. All details concerning weights, identification references and other similar data previously required by the price clerks in the central price bureau are no longer necessary and, in addition, checks from time to time have indicated a saving at main stores of approximately 40 per cent in the time of applying prices as compared with the time consumed in handling the work in a central bureau. As a result of investigations of overtime expenses at one main store, in the face of a 60 per cent increase in the material handled, the saving was found to be about $2,500 a year.

Plans of the Motor Transport Division, A. R. A.

WASHINGTON, D. C.

PRESIDENT R. H. AISHTON, of the American Railway Association, has issued a statement outlining the organization and plans of the Motor Transport Division established in accordance with a resolution adopted by the association at its meeting in New York on November 17 "on account of the growing importance of the subject of motor transport."

A. P. Russell

Membership in the division will be confined to representatives of the railroads or subsidiaries in the United States, Canada, Mexico and Cuba. Headquarters of the division will be at the offices of the American Railway Association at 30 Vesey, street, New York.

A. P. Russell, of Boston, vice-president of the New York, New Haven & Hartford, and president of the New England Transportation Company which operates the motor buses of the New Haven system, has been appointed temporary chairman of the Motor Transport Division. The temporary general committee named to organize and outline the work of the division is as follows:

A. P. Russell, vice-president, New York, New Haven & Hartford. (Temporary Chairman).
J. G. Drew, vice-president, Missouri Pacific.
H. F. Fritch, passenger Traffic Manager, Boston & Maine.
A. Hatton, General Superintendent of Transportation, Canadian Pacific.
C. S. Lake, Special Assistant to President, Chesapeake & Ohio.
G. W. Lupton, Assistant to Vice-President, Atchison, Topeka & Santa Fe.
R. N. Van Doren, vice-president and general counsel, Chicago & Northwestern.
T. B. Wilson, supervisor of transportation, Southern Pacific.
G. C. Woodruff, assistant freight traffic manager, New York Central.

George M. Campbell, of New York, assistant to the secretary of the American Railway Association, will be secretary of the new division.

The new division has been made necessary, Mr. Aishton says, by the increase in the number of railroads which operate motor buses, there being now approximately 60. The purpose of the organization will be to bring together the railroads interested in the development of motor transportation, whether freight or passenger, in order to study the problems arising therefrom, and, through the coordination of the rail carriers, to devise the most effective means possible for the development of such transportation.

The work of the Motor Transport Division will be divided among three sections, one of which will devote its attention to the study of the application of the motor bus to the use of steam railroads, while another section will study the application of the motor truck to the use of steam railroads, and the third section will devote its attention to the application of the rail motor car to the use of steam railroads, particularly on lines where passenger traffic is not sufficient to warrant the operation of passenger trains.

The first meeting of the Motor Transport Division will be held in Chicago in January, the definite date to be fixed later, at which time a permanent organization will be perfected and the scope of the work of the division discussed.

The division is the outgrowth of the Railroad Motor Transport Conference organized in August, 1926, by approximately fifty railroads, which were at that time either actually operating motor buses and trucks or were interested in the development of that mode of transportation. Mr. Russell was chairman of the committee on organization of the conference, which was formed for the purpose of providing a means for the interchange of views of all railroads interested in motor transport questions.

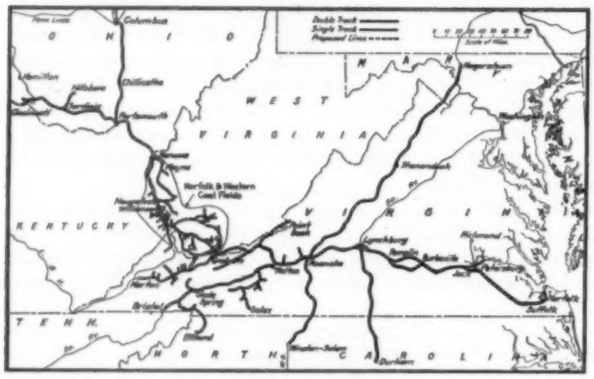
Ewing Galloway

Customs Inspection at Railway Station, Cherbourg, France

Norfolk & Western

Now pays $10 *per share on stock and in* 1927 *will earn* $20—
Remarkable record of operating efficiency

THE recent announcement that the directors of the Norfolk & Western have declared an extra dividend of 2 per cent on the common stock, making the 1927 dividend disbursements total 10 per cent, serves again to draw attention to the great prosperity and operating efficiency of this important carrier of non-union bituminous coal. The 10 per cent that will be paid in dividends will be the same in amount as was paid in 1926 although last year the total was divided as between 7 per cent regular (payable 1¾ per cent quarterly) and 3 per cent extra. The Norfolk & Western regular dividend has been on an 8 per cent annual basis only since the early part of the present year. The rate was increased from 6 to 7 per cent in 1916, extra dividends of 1 per cent was paid in 1916 and 1917 and from 1922 to 1925, and in 1926, as above noted, an extra of 3 per cent was paid.



The Norfolk & Western

President Needles Quoted

President Arthur C. Needles was recently quoted regarding the Norfolk & Western's 1927 prospects as follows:

"September gross and net will approximate $10,000,000 and $4,000,000 respectively. This is about $1,000,000 less gross and $800,000 less net than September, 1926. The last three months of 1927 will doubtless show about the same proportionate reductions as compared with 1926. During this period last year our tidewater coal business was very heavy because of the British strike. We do not expect the resumption of union mining in the West to cause any appreciable loss of market for our coal. The matter of lake coal rates is still before the commission, and until a decision is made I cannot say, of course, what the effect of lake coal shipments will be. While the coal business is awfully low at this time, our merchandise business is holding up. We expect no decided increase in business during the last quarter.

"We are constantly spending money on road and equipment to keep our property in good condition. During the first eight months of 1927 we have spent something over $17,000,000 on road and equipment. The annual increase in pay roll by wage increases granted this year is about $600,000. Per share earnings on the common stock for 1927 will be around $20 per share."

Norfolk & Western common stock has been quoted during most of this year a few points below other railroad common stocks paying 10 per cent dividends. At the present time it is selling at about the same price as the other 10 per cent issues. It has had a price range this year between 156 and 202. It is now selling at about 198. The stock is regarded as being in the investment class. The company has always succeeded in earning its dividends with a satisfactory margin. The 8 per cent dividends paid in 1923 and 1924 were earned over 1½ times in each year. In 1925 they were earned twice, with per-share earnings of $18.68 and in 1926 the 10 per cent dividends paid were earned 2½ times with per-share earnings of $25.71.

Growth of Coal Traffic

Of the Norfolk & Western's revenue tonnage over three-quarters is bituminous coal, the exact percentage in 1926 being 78.37. This coal originates in five fields designated respectively the Kenova, Thacker, Tug River, Pocahontas and Clinch Valley. A large proportion of it originates on lands owned by the Pocahontas Coal & Coke Company, all of the capital stock of which is owned by the Norfolk & Western. The coal company has holdings totaling approximately 300,000 acres in Virginia and West Virginia of which about 180,000 are under lease to operating companies. It does not mine or sell coal itself but its income is mainly derived from royalties paid by the operating companies and from the sale of timber. The output of coal from the company's leased property in 1926 totaled 16,509,648, equivalent to 36½ per cent of the total bituminous coal tonnage carried by the railroad. The growth of the coal fields along the Norfolk & Western has been conservative and there remain vast undeveloped areas in its territory. Notwithstanding the conservative development the Norfolk & Western's coal tonnage in 1926 was some 50 per cent greater than in 1923 while during the same period the total number of revenue tons increased 36½ per cent and the revenue ton-miles 50 per cent.

In keeping with the changing trends in the coal industry the railroad has sent a growing proportion of its total coal tonnage to the lakes and to the middle western industrial centers formerly served principally from the union Illinois and Indiana coal fields. A particularly large proportion of the road's expenditures for additions and betterments have been devoted to improving its facilities for handling westbound coal. Notable in this respect has been the enlargement of yards at Williamson, W. Va., and Portsmouth, Ohio. The company has a double track main line or its equivalent from the coal fields both to tidewater and to Columbus, Ohio. Between Naugatuck and Kenova, as a result of the recent double tracking of the Big Sandy line, it has the equivalent of three tracks. The fact that the Chesapeake & Ohio is now using its own line between Portsmouth and Columbus and no longer uses trackage rights over the Norfolk & Western between these points has had the effect of substantially increasing the capacity of the Norfolk & Western's line for handling westbound tonnage.

Anticipated Service Demands

The Norfolk & Western is much like such a railroad as the Lackawanna as relates to its plant and facilities. It seems to have anticipated especially well the demands upon it for service. The capital expenditures which it has found necessary to make to handle the 50 per cent in-

crease in traffic in the last few years are given in the following table:

Additions and Betterments

Year	Road	Equipment	Total
1923	$6,550,705	Cr. $594,047	$5,956,658
1924	12,233,981	13,650,044	25,884,025
1925	13,519,550	10,839,503	24,359,053
1926	14,605,060	1,440,560	16,045,620
1927, 1st 8 months			*17,000,000

*Estimated.

The following statement of revenues and expenses for the first nine months of 1927 supplements the statement by President Needles quoted above.

Revenues and Expenses, First Nine Months

	1927	1926	Increase or decrease	Per cent increase or decrease
Railway operating revenues	$85,028,081	$87,251,093	—$2,223,012	3
Railway operating expenses:				
Maintenance of way	11,457,873	12,136,028	—678,155	—6
Maintenance of equipment	16,892,643	15,748,393	1,144,250	7
Transportation	22,026,210	21,991,431	34,779	...
Total	53,165,789	52,367,886	797,903	2
Net ry. operating revenues	31,862,292	34,883,207	—3,020,915	—9
Railway tax accruals	7,750,000	7,675,000	75,000	1
Net railway operating income	26,320,051	29,429,514	—3,109,463	—11
Net income	23,645,205	26,307,361	—2,662,155	—10
Operating ratio	62.53	60.02		
Transportation ratio	25.90	25.20		

It is noteworthy that even with the cessation of mining for several months of this year in the union coal fields in Indiana and Illinois, the Norfolk & Western's total operating revenues for the first nine-months' period were less than those of last year, the reason being apparently that the 1926 coal traffic was abnormally expanded as a result of the British coal strike. The road's loadings of coal from the first of the year to the week ended October 8 were 2 per cent less than those of the same period of last year, the details being given in the following figures:

	Coal loadings		Total loadings	
	1927	1926	1927	1926
January, 4 weeks	66,862	66,843	95,106	93,726
February, 4 weeks	63,165	63,577	93,732	91,646
March, 4 weeks	62,997	56,651	94,460	86,529
April, 5 weeks	74,780	66,857	116,897	107,111
May, 4 weeks	65,727	63,277	98,756	95,025
June, 4 weeks	61,291	67,542	92,358	98,320
July, 5 weks	71,216	85,285	109,432	123,992
August, 4 weeks	63,757	69,126	96,661	100,515
September, 4 weeks	66,676	69,036	100,600	103,424
October, 2 weeks	32,977	35,112	49,983	52,456
Total, 41 weeks	629,448	643,306	947,985	952,744

Operating Efficiency

The Norfolk & Western has the distinction of reporting the largest gross ton-miles per train hour of any railroad in the United States and in view of this fact its operating statistics, shown in Table II, present a remarkable record. The figures are given for the first seven months of 1927 as compared with the same period of 1923. They show an increase of 40 per cent in gross ton-miles in 1927 as compared with 1923, which increase in traffic was handled with only 2 per cent increase in freight train miles and with an 18 per cent decrease in freight train hours and 3 per cent decrease in coal consumption. There is an increase of 37 per cent in the gross train load and an increase from 10.5 to 13.1 miles per hour in train-speed. The 38,045 gross ton-miles per train hour reported for the first seven months of 1927 were 70 per cent better than for the first seven months of 1923. The remarkable condition of the road's power is indicated by an average per cent of locomotives unserviceable in the first seven months of 1927 of but 8.9 per cent. The table shows also but 1.5 per cent bad order cars. These figures explain the road's operating ratio in the first nine months of 1927 of but 62.53 and its ratio of transportation expenses to total operating expenses of but 25.90.

Table II—Comparison of Selected Freight Operation Statistics

	1st 7 mos. 1927	1st 7 mos. 1923	Per-cent of change Inc.	Per-cent of change Dec.
Mileage operated	2,232	2,228	...	...
Gross ton-miles (thousands)	17,768,729	12,660,743	40	...
Net ton-miles (thousands)	9,552,631	6,898,706	38½	...
Freight train-miles (thousands)	6,096	5,966	2	...
Freight locomotive-miles (thousands)	7,676	7,910	...	3
Freight car-miles (thousands)	359,502	265,479	35½	...
Freight train-hours	467,048	566,557	...	18
Tons of coal consumed by freight locos.	1,359,156	1,408,355	...	3
Car-miles per day	45.0	32.8	37	...
Net tons per loaded car	45.0	41.9	7	...
Per cent loaded to total car-miles	59.0	62.1	...	3.1
Net ton-miles per car day	1,196	852	40	...
Freight cars per train	60.0	45.5	32	...
Gross tons per train	2,915	2,122	37	...
Net tons per train	1,567	1,156	36	...
Train speed, miles per train-hour	13.1	10.5	25	...
Gross ton-miles per train-hour	38,045	22,347	70	...
Net ton-miles per train-hour	20,453	12,177	68	...
Lb. coal per 1,000 gross ton-miles	136	195	...	30
Loco.-miles per loco.-day	59.9	53.2	13	...
Per cent freight locos. unserviceable	8.9	24.2	...	15.3
Per cent freight cars unserviceable	1.5	5.2	...	3.7

Table I—Norfolk & Western Operating Results, Selected Items

Year ended June 30, 1916, and Calendar years, 1920 to 1926

	1916	1920	1921	1922	1923	1924	1925	1926
Average mileage operated	2,059	2,200	2,226	2,238	2,238	2,241	2,241	2,241
Total operating revenues	57,304,586	88,489,356	80,718,802	90,352,887	95,591,682	97,707,310	105,218,991	120,409,038
Total operating expenses	32,181,346	84,943,837	64,346,857	68,052,804	72,598,871	69,875,109	67,934,815	71,226,914
Net operating revenues	25,123,240	3,545,519	16,371,945	22,300,084	22,992,811	27,832,202	37,284,175	49,182,124
Railway tax accruals	2,065,000	.....	4,730,000	6,000,000	6,225,000	7,400,000	8,600,000	11,075,000
Railway operating income	23,054,786	.....	11,613,964	16,292,145	16,741,639	20,418,662	28,655,153	38,094,793
Hire of freight cars—Cr. Bal.	1,011,978	.....	2,680,685	2,161,002	3,003,995	1,726,291	2,386,617	2,418,469
Net railway operating income	24,075,291	4,111,385	14,479,836	18,590,689	20,008,866	22,463,369	31,510,952	40,922,151
Gross income	24,991,627	17,936,740	15,587,343	19,774,166	23,613,076	23,546,593	32,391,083	42,430,648
Interest on funded debt	4,354,683	5,355,746	5,360,232	5,057,789	4,622,613	5,064,022	5,366,857	5,224,780
Net income	20,624,058	12,496,788	10,043,181	14,554,989	18,788,497	18,243,348	26,564,759	36,867,506
Preferred dividends (4)	919,672	919,692	919,692	919,692	919,692	919,692	919,692	919,692
Common dividends—Rate	7¼	7	7	8	8	8	8	10
Common dividends—Amount	8,237,099	8,501,937	8,505,271	9,934,008	10,304,433	10,563,752	10,890,199	13,883,657
Earnings per share on com. stock	$16.66	$9.54	$7.51	$10.67	$13.85	$12.85	$18.69	$25.71
Revenue ton-mile (thousands)	11,795,892	11,063,033	8,482,095	10,422,301	11,161,523	12,130,124	13,683,557	16,719,412
Revenue pass.-miles (thousands)	270,305	346,264	292,223	261,756	296,044	262,306	235,135	221,809
Revenue per ton per mile (cents)	0.420	0.668	0.793	0.745	0.729	0.699	.682	0.650
Total revenue tons	44,373,456	40,685,743	29,684,935	37,357,078	42,574,883	44,425,701	50,266,557	58,188,077
Tons revenue bituminous coal	30,269,110	26,035,500	21,766,196	28,120,614	29,468,395	32,579,530	38,122,834	45,599,980
Per cent bituminous coal of total	68.22	63.99	73.33	75.28	69.22	73.33	75.84	78.37
Transportation ratio	24.67	44.67	37.17	32.27	33.54	29.90	26.74	25.15
Operating ratio	56.16	95.99	79.25	75.27	76.05	71.51	64.57	59.15
Per cent net railway operating income to total operating revenue	42.0	0.5	17.9	20.6	20.9	23.0	29.9	34.0

is also true that investors give much weight to the Pennsylvania's large interest in the property and the possibility that some day the Pennsylvania may find it desirable to supplement its present working control with a lease. The Pennsylvania is said at the present time to own 45 per cent of all the Norfolk & Western's preferred and common stock outstanding and to have enough other stock held in its interest to give it a majority control. The Norfolk & Western, however, is operated entirely independently. The expectation is that if the Pennsylvania ever desires to make further overtures regarding the lease of the property it will have to guarantee 10 per cent dividends. Previous negotiations looking to a lease of the Norfolk & Western by the parent company on the basis of guaranteeing an 8 per cent return failed.

Security Owners Association Enlarges Activities

THE National Association of Owners of Railroad Securities has voted to change its name to "National Association of Owners of Railroad and Public Utility Securities," so as to provide a more comprehensive understanding of the original purpose of the association, when it was established in 1917.

This action was taken at a meeting in New York called by Milton W. Harrison, president of the association and a trustee of the Bowery Savings Bank, and was attended by some 50 members of the advisory and executive committees of the association.

Officers

Milton W. Harrison was reelected president of the association. Henry Bruere of New York was appointed treasurer, and the following were elected as district vice-presidents: Darwin P. Kingsley, president, New York Life Insurance Company; T. K. Glenn, president, Trust Company of Georgia, Atlanta; M. A. Taylor, president, First Trust and Savings Bank, Chicago; I. H. Kempner, president, United States National Bank, Galveston, Tex., and George I. Cochrane, president, Pacific Mutual Life Insurance Company, Los Angeles.

General offices of the association will be maintained at 11 East 36th Street, New York. The present membership of the association will be extended to include such further individual and institutional owners of railway and public utility securities as may care to avail themselves of the association's advantages.

In outlining the scope and purpose of the work in hand, President Harrison said: "Changing the name of the association to that of National Association of Owners of Railroad and Public Utility Securities, with objectives that embrace public utility securities as well, effectively carries out the reason for the establishment of the association in 1917. Since that date, holders of railroad securities have become extensive investors in public utilities.

Danger in Legislation

"At present Congress and the commissions undertake to represent the investors without the help of the investors themselves. It becomes, therefore, an obligation of nation-wide importance that investors effectively put themselves in a position not only to be of constructive assistance to Congress and to regulatory commissions, but to protect and stabilize the securities they own. Unwise legislation and regulation can do much damage to the soundness of security values because the industries behind such securities are under government control.

"With regard to railroads, of great importance to our interest is the question of primary valuations. Under the authority of the Interstate Commerce Act the commission has prosecuted this work for more than a decade along lines which it has itself laid down. The commission's methods have been earnestly protested by parties at issue and with the greatest divergence of opinion. Several attempts have been made by protestants to secure review by the Supreme Court but such petitions have been dismissed pending the time the commission seeks to make practical application of its valuation findings. Such court review will probably be had in the early months of 1928. It is of great importance to us that valuation principles and procedure are still in a formative state and are susceptible of being molded by Congress and by courts along lines radically different from those adopted by the commission. Valuation organizations representing irreconcilable interests are being maintained in Washington. These include besides the railroads themselves and state public service commissions, the organizations of labor, and such, for example, as the National Conference on Valuation fathered by the late Senator LaFollette and still active under congressional leadership. It must be manifest that these interests emphasize the necessity and urgent importance of our concerted action. Our duty to take a position consistent with sound public policy is clear-cut.

Recapture

"Likewise that phase of valuation looking to recapture is in its infancy. In the event the commission's ruling in the O'Fallon case is reversed by the court, a flood of bills dealing with the subject is to be expected in the new Congress. So far as I am advised, no one has undertaken to study the O'Fallon decision from the aspect of its effect upon national transportation. This latter feature obviously should be of great importance to the commission, to the Supreme Court, to Congress, and of supreme importance to investors.

"There are almost daily before the Interstate Commerce Commission finance dockets involving the issuance or retirement of security issues with which we are most directly concerned. There are pronounced indications that the commission is slowly evolving a policy on financial structures which will in the future be controlling upon it. We should certainly know how our interests are affected in these cases and be in a position effectively to intervene when necessary. Railway taxation also is receiving constantly increasing attention on the part of executives, legislators and others. The relation between valuation for rate-making and for taxation should be more earnestly studied and we should, I believe, participate constructively to inform the public on this and similar matters."

Reports made at the meeting disclosed that the life insurance companies of the country alone have almost a billion dollars invested in gas, power and light utilities, and close to two billion dollars in railroads. Also, that the savings banks have more than a billion dollars invested in railroads and three hundred millions invested in public utilities. Emphasis was laid on the fact that these ownerships, together with college and other trust funds, represent a large proportion of the outstanding securities of both industries, and that their trusteeships, the beneficiaries of which number over 70,000,000 of people in the United States, not only call for but demand that they aid Congress and regulatory commissions in arriving at sound and equitable determinations respecting these great industries and their investments.

Air Transport in Rapid Spread

United States now served by 7,500 miles of air mail routes—
Express and passengers carried on some lines

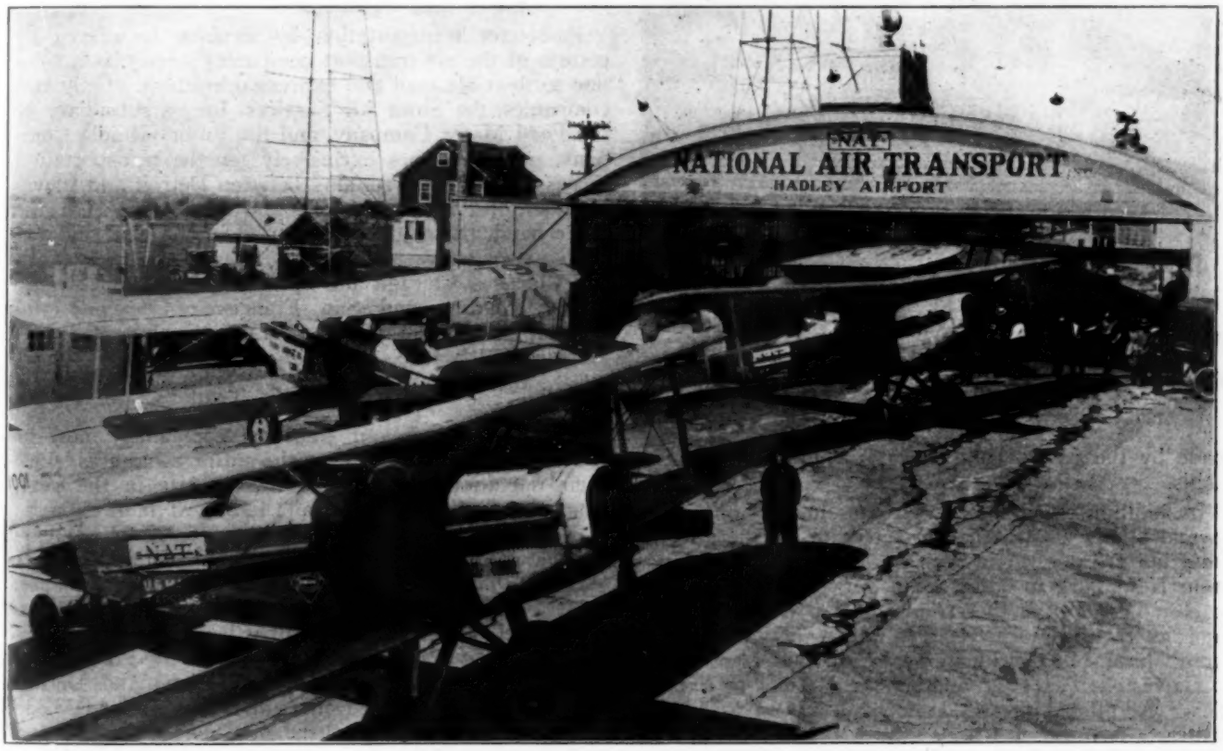
AIR transportation in the United States, while still in its infancy, has nevertheless reached the stage in its development at which its status as a means of transportation may be studied with interest by those engaged in the business of furnishing other forms of transportation. While there seems to be little likelihood, the forecasts of numerous aviation enthusiasts to the contrary notwithstanding, that air transportation will ever become a serious competitor for traffic now handled by the railways, it is considered fairly certain that it will develop extensively as an auxiliary to railway service. This being the case railway officers will find it to their advantage to keep in touch with developments in domestic air transportation.

Prior to the recent war, there was a minimum of what might be termed commercial aviation and practically nothing in the way of regular air transportation in this country. Since the war, however, the progress made has been such that the country is now covered from one end to another by the skeleton of what is rapidly becoming a system of air transportation lines reaching all of the principal localities in the United States.

While by far the greatest volume of flying in America at the present time—19,000,000 miles last year—is done by individuals and companies which make a business of offering special services of unscheduled, occasional nature for the transportation of passengers and goods, for aerial photography, sightseeing, etc., a considerable amount of flying is done by well established air transport companies. The operations of air transport companies most closely parallel those of the railways and constitute the branch of aviation which will have the greatest development in the future.

Mail Principal Air Traffic Commodity

The present air transport lines from the beginning have had as their principal traffic the transportation of mail under contracts with the United States government.



National Air Transport, Inc., Photos

Hadley Field, New Brunswick, N. J., the Air Port for New York Planes

In the beginning, the air transport companies were organized to carry mail alone and it still constitutes the bulk of the traffic handled by them. At the present time, there are 13 air transport companies carrying mail under contract with the government. One company operates a line from Boston, Mass., to New York. Another operates a line from New York to Chicago and thence to Dallas, Tex. Operated in conjunction with the latter company to provide the transcontinental air mail service is a line from Chicago to San Francisco, Cal. Other routes extend from Cleveland, Ohio, to Pittsburgh, Pa.; from Detroit, Mich., to Cleveland; from Detroit to Chicago; from Chicago to Minneapolis, Minn.; from Chicago to St. Louis, Mo.; from Cheyenne, Wyo., to Pueblo, Colo.; from Salt Lake City, Utah, to Pasco, Wash.; from Salt Lake City to Los Angeles, Cal.; from

Los Angeles to Seattle, Wash.; from Seattle to Victoria; and from New Orleans, La., to Pilottown. The total number of route miles operated by these companies is approximately 7,500, and their planes fly approximately 16,500 miles daily.

The backbone of the air mail system is the transcontinental route from New York to San Francisco. On this line planes leave New York at noon, arriving at San Francisco the following afternoon. Eastbound, the planes leave San Francisco in the morning and arrive in New York the following evening. Connections with the transcontinental route are made by planes from Boston, Pittsburgh, Detroit, Pueblo, Pasco and Los Angeles. Night air mail service, in addition to the day service, is operated on the line from Chicago to New York, and connections with the night mail planes are

National Air Transport, Inc., Photos

The First Air Express Cargo from New York Arriving at Chicago

made by the planes from Dallas, Minneapolis and St. Louis.

In addition to the air mail routes now in operation, several others have been contracted for by the government but are not yet in service. One of these extends from New York to Atlanta, Ga.; another from Atlanta to New Orleans; another from Albany, N. Y., to Cleveland; another from Cleveland to Louisville, Ky.; another from Chicago to Cincinnati, Ohio; another from Dallas to Galveston, Tex.; and another from Dallas to Laredo, Tex. Additional proposed air mail routes, for which contracts have not yet been awarded, will extend from Atlanta to Miami, Fla., and from Salt Lake City to Great Falls, Mont. Consideration is being given to additional routes to extend from Boston to Albany; from New York to Montreal, Que.; from Louisville to Birmingham, Ala.; from St. Louis to Atlanta; from St. Louis to Memphis, Tenn.; from Minneapolis to Winnipeg, Man.; and from Miami to Key West, Fla. When these routes have been placed in operation, the total mileage of air transport lines will be in excess of 11,000 miles.

Air Express Service Recently Inaugurated

The introduction of air express service, which had been carried on independently by certain of the air mail lines, had its formal inauguration on September 1 of this year when some of the lines began the transportation of express under contracts with the American Railway Express Company. Under these contracts, express is handled between Boston, New York, Chicago, Dallas, Salt Lake City, San Francisco, Los Angeles, and intermediate points served by the four air transport companies operating over these routes. The air transport companies act merely as carriers for the express company, the latter organization handling the solicitation of traffic, its billing and its transportation to and from the fields used by the air transport companies.

While the volume of express handled by airplane has not yet reached large proportions, it has been showing a steady increase ever since it began. The average cargoes handled by the air transport companies, with contracts with the express company as well as with the government, are now made up of about 75 per cent mail and 25 per cent express. Thus, mail, for the transportation of which the air transport companies were originally organized, still constitutes the bulk of their traffic, although it is not considered by those engaged in the business that this condition will long exist. The inauguration of air express service has been too recent to permit of any conclusions regarding its future growth, but it is confidently expected that the express matter handled by airplane will soon be larger in amount than the volume of mail transported.

Passenger transportation by airplane is offered by certain of the air transport companies merely as a sideline to their air mail and express operations. Only two companies, the Stout Air Services, Inc., a subsidiary of the Ford Motor Company, and the Embry-Riddle Company, operate planes exclusively for the transportation of passengers, these running between Detroit and Cleveland and between Louisville and Cleveland. On the other hand, passengers are carried in the mail and express planes between Boston and New York; New York and Chicago; Chicago and Dallas; Chicago and Minneapolis; Chicago and San Francisco; Cheyenne and Pueblo; Salt Lake City and Los Angeles; and Los Angeles and Seattle.

Statistics of Air Traffic

During 1926, the air transport companies, most of which did not operate during the entire 12 months, since their operations began more or less late in the year, transported 810,855 lb. of mail; 1,733,090 lb. of express; and 5,782 passengers. Of the mail, 286,028 lb. was carried between New York and San Francisco, and 147,621 lb. between New York and Chicago on the night planes, these being operated during 1926 by the government. Nearly all of the express matter handled by airplanes during 1926 was carried in the planes of the Ford Motor Company between Detroit and Cleveland and Detroit and Chicago. Between Detroit and Cleveland, 1,033,338 lb. of express were handled, and between Detroit and Chicago 696,197 lb. of express were carried, these being exclusively express shipments made by the Ford Motor Company. Most of the passengers handled in 1926 were carried by the Philadelphia Rapid Transit Company's air service between Philadelphia, Pa., and Washington, D. C., and Norfolk, Va., a service which was continued for five months, carrying 3,695 passengers.

During the first six months of 1927, a total of 621,236 lb. of mail was carried by the air transport companies. The aggregate volume of express handled by airplanes was 1,045,222 lb., while the number of passengers carried was 1,891.

Evidence of the increasing use of the air mail is to be had in the comparison of the statistics of mail carried by airplanes during all of 1926 and in the first six months of 1927. During the entire year 1926, the total number of pounds of mail carried on the New York-San Francisco line was 286,028 lb., while during the first half of 1927 the volume of mail handled on this line was 212,976 lb. On the night air mail between New

York and Chicago, 147,621 lb. of mail was carried during the 12 months of 1926, while during the first six months of 1927, 88,048 lb. of mail was carried on this line. These are the only two lines which were operated throughout 1926, so that worth-while comparisons of the statistics of mail handled on the other lines cannot be made.

Reliability of Air Service

Proof of the reliability and regularity of air transportation is contained in statistics covering the operations of the air transport companies during the first six months of 1927, as prepared by the Department of Commerce. During this period a total of 5,272 trips were scheduled by the various companies. Of these, a total of 4,587 trips, or 87 per cent, were completed. Of the remainder of the scheduled trips, 506 were uncompleted and 179 were not started. Failure to start or complete trips were ascribed to the following causes: Weather and darkness, 623; structural trouble, 4; mechanical trouble, 28; shortage of equipment, 30.

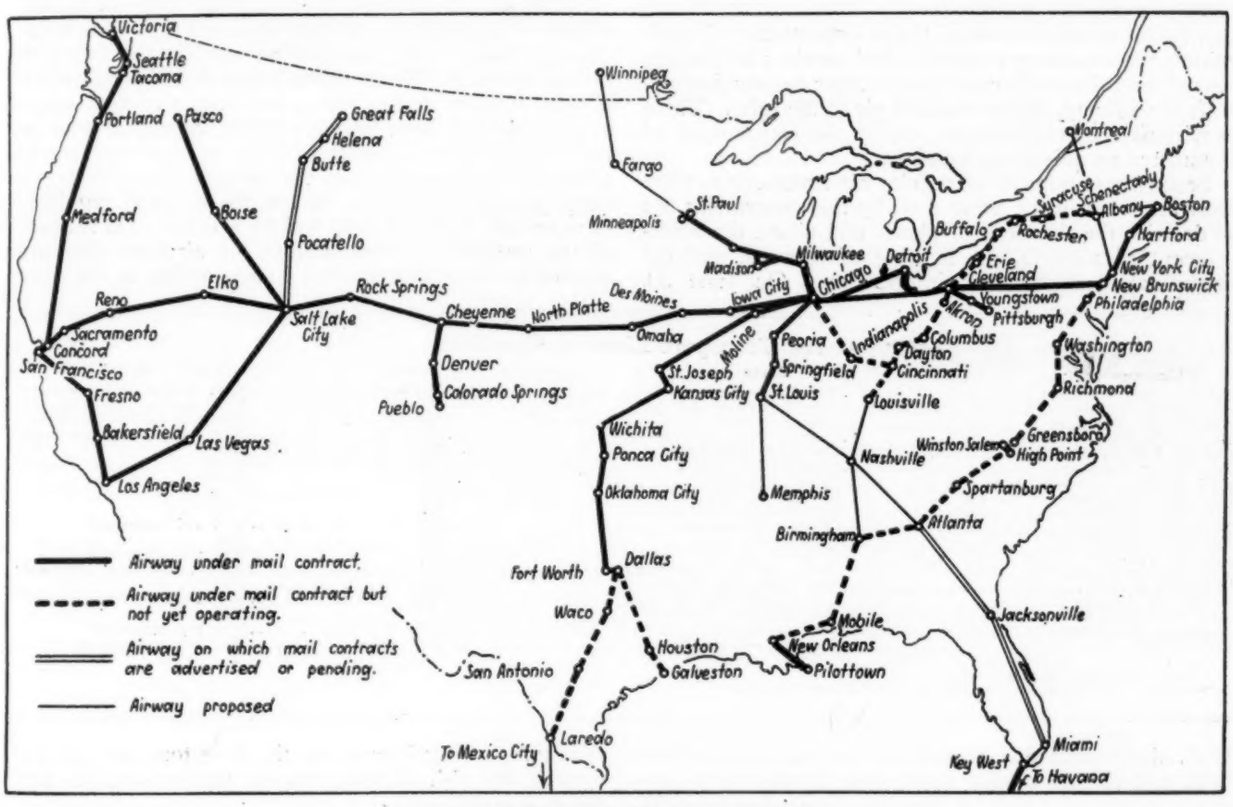
Fatalities in air transport operations have been few. In 1926 the government-operated air mail flew 2,583,056 miles with only one fatality. During the first six months of 1927 the government air mail flew 1,239,394 miles with only one fatality. Among the contract mail operators the record was nearly as good. These air transport companies contracting with the government flew 1,958,144 miles during 1926 with only three pilots and one passenger killed.

In the first six months of 1927, these companies flew 1,399,720 miles with only two pilot fatalities and one passenger fatality.

Rates Charged for Air Transportation

The rate charged for air mail transportation is 10 cents per half ounce between any two points in the United States, this rate covering any necessary rail haul in addition to the air haul. The rate for the transportation of express shipments by airplane depends upon the distance covered and to a certain extent upon the size as well as the weight of shipments. The average rate per pound per mile is approximately 1½ mills. Only eight of the air transport companies have published passenger rates. In general, these are 10 cents a mile, but some are higher, so that the average passenger rate is a little more than 13 cents per mile.

Under the law which made possible the contracting of air mail routes by the government, the post office cannot pay any contractor more than $3 per pound for the transportation of mail. The rates actually paid by the government to the contractors range from a maximum of $3 per pound to a minimum of $1.08 per pound. In applying for air mail contracts, air transport companies specify the rate at which they are willing to carry mail, and the contract, other conditions such as financial responsibility and the type of equipment to be used being equal, goes to the company making the lowest bid.



Present and Proposed Air Transport Lines

Department of Commerce Aids Air Transport Development

Although none of the air transport companies operating in the United States are subsidized by the government, their operations are materially assisted, if not in fact made possible, by the activities of the Department of Commerce. Under the assistant secretary for aeronautics of the Department of Commerce the provisions

of the Air Commerce Act of 1926, considered the legislative cornerstone for the development of civil aeronautics in America, are administered by various divisions of the department. Under this act the Department of Commerce was directed to establish and maintain civil airways; to operate and maintain intermediate landing fields, lights, signal and radio direction finding apparatus; to chart airways and publish maps; to encourage the establishment of airports, airways and other air navigation facilities; to recommend to the Department of Agriculture the necessary meteorological service; to identify aircraft and license aircraft and airmen; to examine aircraft periodically, and to establish air traffic rules. These provisions are being carried out by the Department of Commerce as quickly as possible.

From the standpoint of regular air transportation the most important work being done by this department has to do with the licensing of planes and pilots, the establishment of airports, the lighting of airways, and the dissemination of weather information. On June 30, 1927, there were 864 registered airports, intermediate fields and private landing fields, and this number is expected to exceed 1,000 by June 30, 1928. On June 30, 1927, a total of 4,121 miles of airways were lighted and lights were being placed on 3,398 additional miles of airways to be completed by June 30, 1928. In addition to these, a total of 6,257 miles of airways are proposed to be lighted during the fiscal year 1930.

The Weather Bureau of the Department of Agriculture has established 22 new upper-air meteorological stations in addition to the 15 existing ones, many of which are located at airports. Weather data collected throughout the United States are transmitted to weather bureau officers twice daily and forecasts of flying conditions are made available to pilots taking off at all terminal fields. The Bureau of Standards is experimenting with radio telephones to provide communication between pilots in the air and the terminal fields, and also with radio beacons by means of which a pilot can determine whether or not he is on his course in fog or darkness.

The work of the Department of Commerce in the development of air transport and the aids to air navigation which it is providing are similar in every way to the aids that it provides for marine navigation. Just as the facilities for marine navigation are indispensable to the marine transportation companies, so are its aids to air navigation indispensable to the air transport companies.

Commercial Uses of Air Transport

Since the principal inducement to traffic offered by the air transport companies is the speed in transit, it has developed a traffic in connection with which the desire to get it to destination as quickly as possible outweighs the cost consideration. Almost every branch of industry has made some use of airplane transportation, but the principal users of it are banks, retail stores, newspapers and magazines, news photograph and moving picture companies, and advertising agencies.

Banks use air transportation to send large checks for collection because of savings in interest. One large Chicago bank, which has used air mail in the shipment of checks for $1,000 or more, keeps a statistical record of what it saves by this means and finds that its average monthly savings have totaled $4,000. Where air express rates are in effect, checks of $100 or more are transported by this service, and the savings are correspondingly greater. Retail stores use the air mail regularly to replenish stocks of light weight articles. On account of the rapidity of transportation by airplane they are enabled to keep their stocks of such articles at the very minimum, saving interest on the inventory and yet not running the risk of being caught without articles that are in demand.

Newspapers, magazines, and news photograph and news reel companies made use of air transport for the transportation of news photographs, cuts, etc. The publication in Chicago newspapers of events which took place as far away as New York only a few hours earlier and the showing in moving picture houses of news reels of events transpiring many miles away the day before are now commonplace, but without air transportation they would not be possible. Advertising agencies use the air mail and air express to rush cuts and copy to their clients or to publishers.

Other instances of common use of air transportation might be piled up endlessly. Almost every day some manufacturer finds that he must get some parts or special tools to a branch plant or to a customer to relieve an acute shortage or situation arriving from a breakdown. Such parts or tools now commonly go forward by air express or air mail, and the savings resulting from having them available where needed in a few hours instead of in a few days are large. Individually these

Air Transport Lines Not Yet in Operation

Company	Route	Length
Colonial Western Airways	Albany—Cleveland	446 Miles
Pitcairn Aviation Co.	New York—Atlanta	757 "
St. Tammany Gulf Coast Airways	Atlanta—New Orleans	483 "
Pan American Airways	Key West—Havana	90 "
Embry-Riddle Co.	Chicago —Cincinnati	267 "
Seth Barwise	Dallas—Galveston	267 "
Seth Barwise	Dallas—Laredo	395 "
Robertson Aircraft Corp.	St. Louis—Memphis	240 "

Air Transport Lines in Operation

Company	Route	Length	Traffic Handled
Colonial Air Transport	New York—Boston	219 miles	Mail, express and passengers
National Air Transport, Inc.	New York—Chicago*	718 "	Mail, express and passengers
National Air Transport	Chicago—Dallas	995 "	Mail, express and passengers
Boeing Air Transport	Chicago—San Francisco	1894 "	Mail, express and passengers
Clifford Ball	Cleveland—Pittsburgh	121 "	Mail
Ford Motor Company	Detroit—Cleveland	155 "	Mail†
Ford Motor Company	Detroit—Chicago	252 "	Mail†
Ford Motor Company	Detroit—Buffalo	218 "	Express†
Stout Air Services, Inc.	Detroit—Cleveland	155 "	Passengers
Northwest Airways	Chicago—Minneapolis	399 "	Mail and passengers
Robertson Aircraft Corp.	Chicago—St. Louis	268 "	Mail
Colorado Airways	Cheyenne—Pueblo	200 "	Mail and passengers
Western Air Express	Salt Lake City—Los Angeles	663 "	Mail, express and passengers
Walter T. Varney	Salt Lake City—Pasco	635 "	Mail
Pacific Air Transport	Los Angeles—Seattle	1156 "	Mail and passengers
New Orleans Air Line	New Orleans—Pilottown	75 "	Mail
Northwest Air Service	Seattle—Victoria	77 "	Mail and passengers
Embry-Riddle Co.	Cleveland—Louisville	345 "	Mail and passengers

* Two round trips operated daily
† Carries company express matter for Ford Motor Company.

shipments do not amount to much, but in their aggregate they constitute a considerable volume of traffic.

Air Transport and the Railways

What the future relation of the railways and the air transport companies will be is a matter which has yet to be decided. In effect the railways are already closely

Loading Air Mail and Express at Cleveland

connected with the air transportation business, this because one of their principal auxiliaries, the American Railway Express Company, is contracting with the air transport companies for air express service. Such air express service is now limited to only a few lines and this limitation will continue until the service has proved to meet a demand for it. When such proof is available air express service will be extended all over the country.

Several of the railways are considering the use of airplanes in connection with their passenger service, particularly with a view to establishing part airplane—part train hauls. The possibilities in this and in other forms of rail-air co-ordination are large.

THE PANAMA RAILROAD STEAMSHIP LINE, New York, has ordered the preparation of plans for a 500 ft. passenger steamship by Cox & Stevens, New York. The ship will be a turbine with Babcock & Wilcox boilers. Auxiliaries will be electrically driven and current will be supplied by Diesel engines.

Commerce Department Report Praises Railway Service

WASHINGTON, D. C.

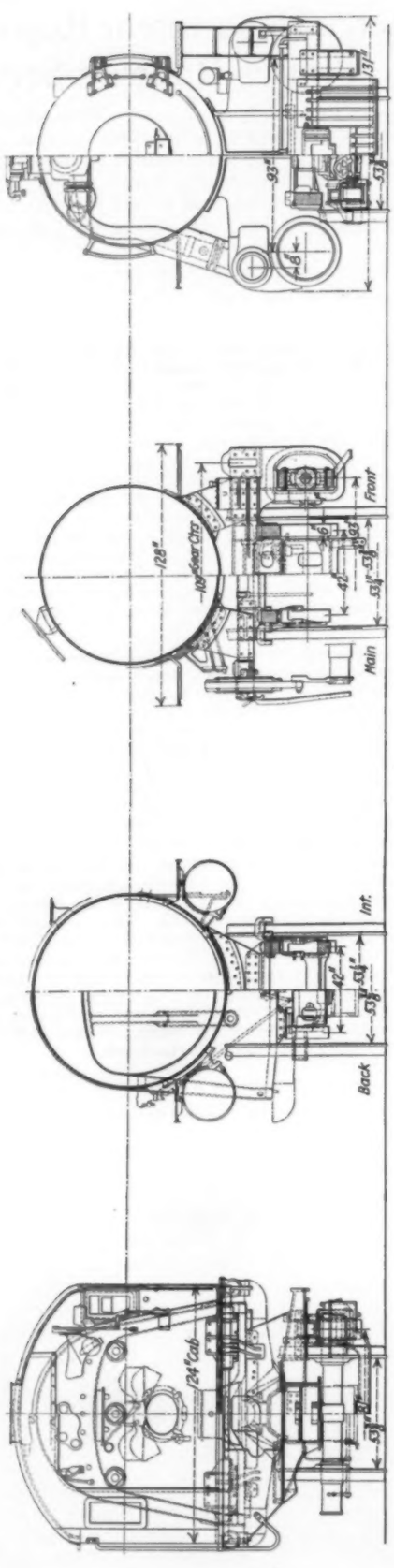
"THE expedition of railway service has reacted favorably upon the entire economic structure," says the annual report of the Secretary of Commerce for the fiscal year ended June 30, in commenting on transportation performance for the year. It is estimated in the report that "the rapidity of freight transportation is now from 30 to 40 per cent greater than that at the close of the war." The report also says in part:

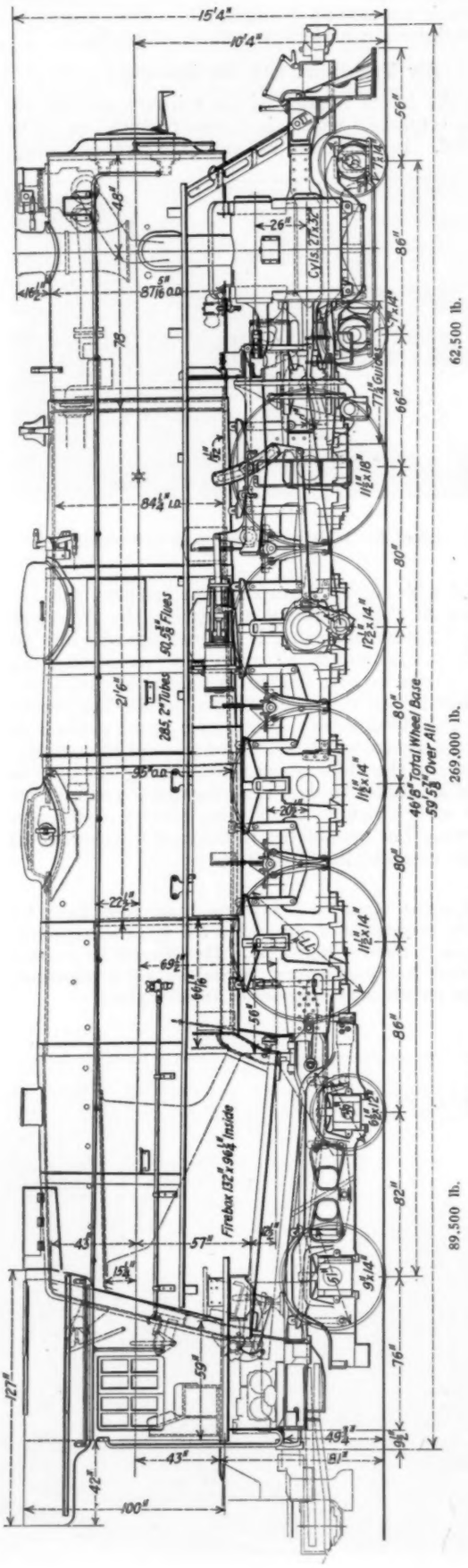
During the last two fiscal years a conspicuous increase has occurred in the volume of railroad freight traffic, even as compared with the high figures for the fiscal years 1924 and 1925. The ton-mileage of freight in 1925-26 was about 8 per cent greater than the year before, and 1926-27 showed a further increase of about 5½ per cent. This gain in traffic was accomplished with an insignificant addition to the number of employees, a fact indicating the continued advance in the efficiency of the railways which has been going on since the close of the war. The increase in the volume of freight traffic has, in the absence of any significant changes in freight rates, served to add to the operating revenues of the railways and to increase their net operating income. Total operating revenues in 1926-27 exceeded the record figures of the preceding year by nearly 2 per cent, and there was a slight increase also in net operating income, which was thus the highest ever reported.

The increased prosperity of the railways in the last few years has gone hand in hand with steady improvement in the services rendered to the public. The chronic car shortages of former years have been overcome. The proportion of rolling equipment in bad order, both cars and locomotives, has been greatly cut down; in this respect the fiscal year 1926-27 marked the most satisfactory situation reported for many years. The tonnage per train has been increased; the average train in 1926-27 carried 786 tons of freight as compared with 656 in 1922. More important still from the standpoint of the general public welfare, delays in the movement of traffic have been greatly reduced.

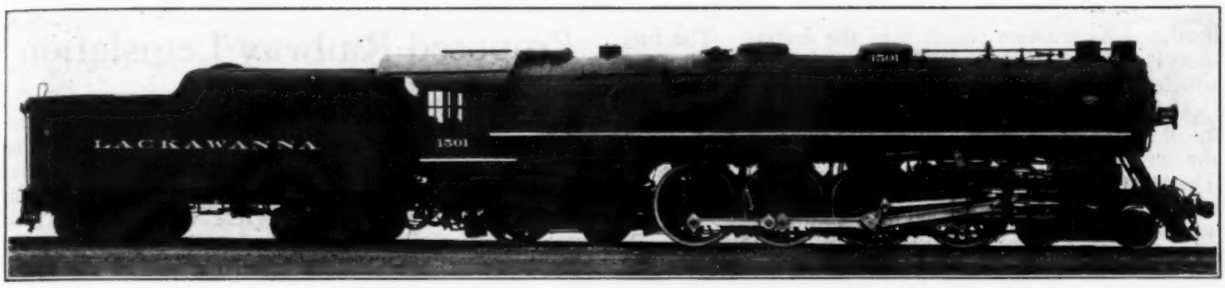
The improvement in railway service has resulted to a great degree from the efforts of the railway companies themselves, but an important auxiliary factor has been the cooperation of shippers and receivers of merchandise. The regional advisory boards of the American Railway Association, comprising representatives of producers and distributors, have served an important purpose. The organization of the system was carried to completion last year. Through the cooperation of these boards transportation needs have been analyzed and anticipated, car requirements estimated in advance, the loading of cars made heavier, and delays in loading and unloading cut down.

Cars on B. & M. Derailed When Track on Which They Stood Was Undermined by Flood





Elevation and Cross Sections of the Lackawanna 4-8-4 Type Locomotives



One of the 4-8-4 Type Locomotives Built by the American Locomotive Company for the Delaware, Lackawanna & Western

Lackawanna Buys Five 4-8-4 Type Locomotives

Develop tractive force of 64,500 lb. with 79-in. drivers— To be used in limited passenger service

THE American Locomotive Company recently delivered five 4-8-4 type locomotives to the Delaware, Lackawanna & Western for use in heavy limited passenger train service. As speed was one of the basic requirements for these locomotives, they were built with 77-in. driving wheels, instead of 69-in. or 73-in. drivers as are used respectively on the 4-6-2 type locomotives purchased by the Lackawanna in 1923 and the three-cylinder 4-8-2 type locomotives delivered in April, 1925. Increased tractive force is also provided in the new power, as compared to the three-cylinder 4-8-2 type. The new 4-8-4 type locomotives develop a tractive force of 64,500 lb. as compared to 61,100 lb. for the 4-8-2. The new locomotives, which have been designated by the railroad the "Pocono" type, also exceed in tractive force, locomotives of the same type recently built by the American Locomotive Company for the Grand Trunk Western and the Northern Pacific, excluding the booster in the latter case.

The total weight of the 4-8-4 type locomotive is 421,000 lb. of which 269,000 lb. is carried on the drivers. The cylinders are 27 in. in diameter by 32 in. stroke and the boiler carries a pressure of 250 lb. This, with the driving wheel diameter of 77 in., gives a maximum tractive force of 64,500 lb. and a factor of adhesion of 4.17.

Maximum Running Cut-Off of 70 Per Cent

These locomotives are built without boosters but the trailing trucks are arranged for their possible further application. The normal maximum running cut-off is 70 per cent but the Walschaert valve gear is designed for a maximum cut-off of 85 per cent which is made available for starting by a novel reverse lever arrangement on which the builders have applied for a patent. This reverse lever arrangement is shown in one of the drawings. The quadrant is only graduated to the extent of 70 per cent cut-off, the lever, however, may be moved further over to give 85 per cent cut-off, but it must be held by hand against spring compression. Release of the hand pressure immediately returns the lever to the position of 70 per cent cut-off. With this arrangement, provision has been made for the possible future application of the booster latch handle on the reverse lever.

Both the engine and trailing trucks are of Commonwealth design, the latter being of the four-wheel Delta type. The top center casting of the engine truck extends across the frames and takes some of the cylinder and frame bolts forming a construction of maximum stiffness which materially lessens the shocks on the cylinders resulting in the side movement of the engine truck and lateral motion of the front drivers. The engine truck is equipped with 33-in. rolled-steel wheels having 7-in. by 14-in. journals. The front wheels on the trailing truck are of rolled-steel 36 in. in diameter and the rear wheels are of cast steel centers, with tires 51 in. in diameter. The journals are 6½ in. by 12 in. and 9 in. by 14 in., respectively.

The maximum length of the main rod was obtained by designing the dish of the piston and cylinder heads toward the front. Floating bushings are used in the back end of the main rod and main connection in the side rods, the flanges being on the inside. The main driving boxes are of the Alco supplemental bearing type, suitable for straight axles, and all other driving box cellars are arranged for narrow grease cakes of the same size as used with similar size journals on other locomotives.

The front driving axle is arranged for lateral motion. Normalized carbon vanadium steel was used in the manufacture of the main and side rods, piston rods, eccentric rods, radius bars, combination lever, combination link and valve stems.

The bumpers are of pressed steel, U-shaped to surround a cast steel bracket which houses a Miner A-18-S friction draft gear and short shank coupler.

Boiler of Ample Proportions

The boiler is of the radial stay, extended wagon top type, 84¼ in. inside diameter at the front and 95 in. outside diameter at the throat. The barrel contains 50 5⅜-in. diameter flues and 285 2-in. tubes, 21 ft. 6 in. long. A Type A superheater having 50 units is used. The firebox which is lagged and jacketed below the running board, is 132 in. long by 96¼ in. wide inside the sheets, which gives a grate area of 88.2 sq. ft. It is fitted with two Nicholson thermic syphons and a brick arch which is carried on two arch tubes and the syphons. Alco flexible staybolts are used in the throat, sides, back-

head and combustion chamber of the firebox. The fuel used is soft coal fed by DuPont stokers, the engine for which is located on the locomotive.

The total evaporating surface of 5,193 sq. ft. is made up of 4,700 sq. ft. in the tubes and flues, 377 sq. ft. in the firebox and 116 sq. ft. in the arch tubes and syphons. The total superheating surface is 1,324 sq. ft. making a combined evaporative and superheating surface of 6,517 sq. ft. The Chambers front end throttle valve is used in connection with the Alco compensating lever to take up expansion in the operating rod. One of the locomotives is equipped with B. & S. cylinder cocks. The boiler is equipped with a Cleveland float type low water alarm. A cut-off and back pressure gage is also provided. A Strombos air whistle is used, and it is located in the rear of the stack.

The Tender

The tanks used on the tenders are of the Ralo Acme type carried on Commonwealth underframes and four-wheel trucks. The tender has a capacity of 12,000 gal. of water and 14 tons of coal. The wheels used under the tenders are of rolled steel, 36 in. in diameter and have 6½-in. by 12-in. journals.

Table of Dimensions, Weights and Proportions of the D. L. & W. 4-8-4 Type Locomotives

Railroad	Delaware, Lackawanna & Western
Builder	American Locomotive Company
Type of locomotive	4-8-4
Service	Heavy passenger
Cylinders, diameter and stroke	27 in. by 32 in.
Valve gear, type	Walschaert
Valves, piston type, size	12 in.
Maximum travel	9 in.
Outside lap	1¼ in.
Exhaust clearance	None
Lead in full gear	3/16 in.
Cut-off in full gear, per cent	70 per cent
Weights in working order:	
On drivers	269,000 lb.
On front truck	62,500 lb.
On trailing truck	89,500 lb.
Total engine	421,000 lb.
Tender	216,000 lb.
Wheel bases:	
Driving	20 ft.
Total engine	46 ft. 8 in.
Total engine and tender	82 ft. 2½ in.
Wheels, diameter outside tires:	
Driving	77 in.
Front truck	33 in.
Trailing truck, front	36 in.
Trailing truck, rear	51 in.
Journals, diameter and length:	
Driving main	12½ in. by 14 in.
Driving, others	11½ in. by 14 in.
Front truck	7 in. by 14 in.
Trailing truck, front	6½ in. by 12 in.
Trailing truck, rear	9 in. by 14 in.
Boiler:	
Type	Extended wagon top
Steam pressure	250 lb.
Fuel, kind	Soft Coal
Diameter, first ring inside	84¼ in.
Firebox, length and width	132 in. by 96¼ in.
Combustion chamber, length	66 1/16 in.
Tubes, number and diameter	285—2 in.
Flues, number and diameter	50—5¾ in.
Length over tube sheets	21 ft. 6 in.
Grate area	88.2 sq. ft.
Heating surfaces:	
Firebox and combustion chamber	377 sq. ft.
Arch tubes	28 sq. ft.
Syphons	88 sq. ft.
Tubes and flues	4,700 sq. ft.
Total evaporative	5,193 sq. ft.
Superheating	1,324 sq. ft.
Combined evaporative and superheating	6,517 sq. ft.
Tender:	
Water capacity	12,000 gal.
Fuel capacity	14 tons.
Wheels, diameter outside tires	36 in.
Journals, diameter and length	6½ in. by 12 in.
Maximum rated tractive force	64,500 lb.
Weight proportions:	
Weight on drivers ÷ total weight engine, per cent	64.1
Weight on drivers ÷ tractive force	4.17
Total weight engine ÷ total heating surface	64.5
Boiler proportions:	
Tractive force ÷ combined heating surface	9.91
Tractive force × diam. drivers ÷ comb. heating surface	76.2
Firebox heating surface, per cent of evap. heating surface	7.26
Combustion heating surface ÷ grate area	73.8

Proposed Railway Legislation

WASHINGTON, D. C.

EFFORTS to amend the consolidation and rate-making and recapture provisions of the Transportation Act are expected to furnish the principal activity in the direction of railway legislation at the session of the seventieth Congress which begins next week. Tax reduction, flood control and farm relief bills, however, are likely to have first call on the attention of the lawmakers and, although opinions differ, many close observers of the situation are inclined to believe that another session may go by without much change in the statutes under which the railways are regulated.

The Fess and Parker consolidation bills which were considered in the last Congress will again be the center of interest of those who are anxious to break the deadlock resulting from the present situation, in which the Interstate Commerce Commission has practically declared its inability to prepare a complete plan of its own as directed by the present law but has shown some reluctance to approve the merger plans of others without some idea of what is to become of the remaining roads in the territory involved. Representative Parker, chairman of the House committee on interstate and foreign commerce, has announced his intention of reintroducing his bill as it stood after extensive hearings at the last session and of holding further hearings to perfect it still further. The Fess bill represents an earlier stage of progress of the same bill and may await the results of the greater activity of the House committee as compared with that of the Senate committee, which considered it in a desultory fashion at the last session.

Some impetus is believed to have been given to the movement for amendment of Section 15a by the action of the National Industrial Traffic League, which has a fairly successful legislative batting average, in approving at its recent annual meeting a recommendation of its legislative committee proposing a re-writing of the rate-making section along the lines of the bill introduced just before the adjournment of Congress by Representative Newton at the request of members of the committee. This bill, which Mr. Newton has announced he will reintroduce in about the same form, would repeal both the recapture clause and the fair return sections of the law and substitute a direction to the commission to try to allow the carriers "to maintain a proper basis of credit to enable the carriers to meet the transportation needs of the country." One of its purposes is to prevent the "enormous" increase in rates which some people think might be required by a strict interpretation of the present law. Mr. Newton has also proposed a repeal of the provision in the present law which authorizes the commission to fix minimum rates.

The short line railroads will also press, with some support, it is understood, from the big roads, the bill which was the subject of hearings at the last session to base the calculation of recapturable "excess" earnings on the average of a period of years instead of a single year. Some 1,500 bills have already been filed by members of Congress in advance for introduction at the opening of the session and it is understood that among them are several of the "old stand-by" variety such as bills to abolish the Pullman surcharge and to amend the long- and short haul clause. Senator Brookhart has stated his intention of introducing a bill for government condemnation of railroad stocks and other members of the agricultural and progressive blocs are expected to fill many pages of the Congressional Record with denunciation of freight rates on agricultural products.

N. I. T. League Desires Repeal of Valuation Act

Railroad consolidations not preserving carrier competition and public interest condemned

RAILROAD consolidations which do not preserve carrier competition and the public interest were condemned and an amendment to Section 15-A of the Transportation Act was advocated by the National Industrial Traffic League at its 21st annual meeting held at Chicago on November 16 and 17. Among other subjects considered were: The Hoch-Smith resolution; the jurisdiction and operation of the I. C. C.; qualifications for admission to practice before the commission; regional commissions; jurisdiction over water rates; car demurrage and storage; classification; diversion and reconsignment; inland waterways and railroad accounting and depreciation. At the banquet on November 16, Congressman Walter H. Newton of Minnesota spoke on transportation legislation in the next Congress, emphasizing consolidation, and W. M. W. Splawn, formerly president of the University of Texas, Austin, Tex., described some foreign experiences with government ownership. W. C. Thompson, president of the Canadian Industrial Traffic League, expressed the need for an international industrial traffic league, saying that since much traffic is handled between the United States and Canada, there is a growing need for a body which can formulate rules and rates satisfactory to both countries. The N. I. T. League appointed a committee to determine whether the formation of such a body was possible.

Officers re-elected for the ensuing year are: President, C. E. Childe, manager of the traffic bureau of the Omaha Chamber of Commerce, Omaha, Neb.; vice-president, W. H. Day, manager of the transportation bureau of the Boston Chamber of Commerce, Boston, Mass.; and treasurer, Edwin C. Wilmore, traffic manager of the Sefton Manufacturing Corporation, Chicago.

The next annual meeting will be held in New York on November 19, 1928. The spring meeting will be omitted next year unless sufficient subjects arise to demand the attention of the league as a whole.

Railroad Consolidations

The league voted to support a bill which is expected to be introduced in the House during the coming session and which is similar to the Parker bill, provided that it shall contain a provision giving recognition to the importance of preserving carrier competition as far as practicable and, provided further, that the bill does not contain a declaration that it is the policy of the law to bring about compulsory consolidations.

The bill must prevent any undue lessening of existing carrier competition if such competition is essential to the public interest and must maintain the existing routes and channels of trade and commerce. The league will oppose legislation which does not so provide.

Valuation

The league voiced the opinion that the practice of valuing road property under section 19-A should be discontinued after the present work is completed and that Section 15-A be amended. In considering the rate-making provisions of the latter section the league feels that it would be proper to retain in the law provisions by which the commission may continue the use of the group system in arriving at the determination of a proper rate level, but that in determining the level the commission should consider conditions affecting the cost of the transportation service for a period of years which would enable the commission to arrive at a better judgment as to normal conditions and normal requirements. A tentative draft of a bill to amend Section 15-A was submitted. Its purpose is to substitute the maintenance of proper credit of carriers as a basis for rate making in lieu of the aggregate value basis now provided in the statute and to base such determinations upon average or normal conditions rather than upon conditions existing at a particular time and, finally, to erase the recapture provisions of the law. In addition, it repeals the provisions for the repayment of all sums collected, the liquidation of all funds being administered and the cessation of all proceedings to collect excess earnings from the carriers for prior years.

Paragraph 2 of the proposed bill follows the language of the present law with respect to making rates by groups or territories and contains the proviso which is now in the present law that the commission shall have reasonable latitude to modify or adjust particular rates which it may find to be unjust or unreasonable. Instead of making the group rate adjustments upon the aggregate value of the railway property, the bill provides that adjustments be made so as to afford the opportunity to the carriers to earn sufficient average income to pay their expenses, their interest charges and such return upon their properties as will enable the carriers as a whole to meet the transportation needs of the country. Paragraph 3 lays down certain matters to be considered by the commission, but is not exclusive in its application. Among other things the commission is required to give consideration to the future requirements of commerce and to the need for improvements and extensions in existing railway properties and to the cost of obtaining capital to provide such improvements and extensions. In considering the revenues and expenses of the carriers the commission shall consider this and the other evidence for such period of time as will tend to reflect average conditions rather than to predicate them upon the conditions immediately prevailing. The present law places each year on a separate basis insofar as the recapture provisions are concerned and requires the readjustment of the rate level from time to time as the operating revenues of the carriers may vary with existing conditions. In a dull year when there is little business, the rates would have to be increased and in a prosperous year when traffic is heavy, they should be reduced if the commission enforces the letter of the law. This was felt to be so unsound that in practice it has never been applied by the commission except that at the termination of federal control, the commission did undertake to make a readjustment which would meet its forecast of conditions then existing. The new proposal will entirely eliminate that uneconomic requirement, but will recognize the paramount importance of maintaining the transportation machine of this country. There should be no

restriction in the law which will prevent railroad companies from following the same periods of prosperity and depression that may be reflected in industry generally. The maintenance of proper credit must take into consideration these fundamental economic conditions so that in times of plenty the carriers should be afforded a much better return than they can be expected to enjoy in times of stress.

The maintenance of credit implies the existence of such conditions as will enable the railroads to participate in the prosperity of the country, for as the country prospers and business develops it will become necessary to provide corresponding enlargements in the transportation facilities. The ascertainment of value as a basis for rate making is impracticable because of the enormous task involved and the expiration of time necessarily involved. Before value can be ascertained the need for revision has became a matter of the ancient past, whereas the maintenance of credit may be judged from the current reports and the conditions existing when the inquiry is made.

The proposed bill does not undertake in any manner to repeal or even interpret the basic common law of constitutional right of the carriers to a fair return under normal conditions. It is simply a substituted rule of group rate making and a statutory provision of a direction of the Interstate Commerce Commission to protect carriers and the public and to provide for the future requirements of our expanding commerce.

The League felt that if a measure of this character is passed, there will be no longer any general necessity for ascertaining the current value of railway properties. The commission has expended some $30,000,000 in this undertaking and it is estimated that the carriers have expended $100,000,000, a large part of which was made necessary in order to develop the information which the commission required. The ascertainments of value for the purpose of Section 15-A are today imposing a very large annual tax upon the carriers which is charged to their operating expenses and is in turn borne by the shipping public. Undoubtedly several million dollars each year are charged to operating expenses, necessarily because of the requirements of the valuation law. The league does not believe that such expenditures will be in the public interest if there be no rule of rate making predicated upon railroad value. It is true that value will still be a basic consideration in determining the rights of carriers but that question will have to be determined anyway when it is a subject of inquiry before the courts in a particular case.

Much of the work which has been done by the commission is of great importance in arriving at future determinations of many questions which will come before the commission. The work of primary valuation has developed important historical information, more definite pictures of investment and more accurate inventories of carrier properties. The league believes that the work of primary valuation as of valuation date should be completed and the information thus developed be preserved for future reference as occasion may require and that the commission should require such reports from the carriers from year to year as will enable it to obtain such information as to the need, care and cost of improvements and will enable it to determine the needs and requirements of commerce; but the ascertainment of such values and of such improvements should not be considered as judicial determination but should be only prima facie evidence of the facts sought to be proved.

It was agreed that Section 19-A be so amended as to provide for the completion of the primary valuation work and that thereafter the commission should develop from year to year such information as will enable it to determine the investments of the carriers, the condition of their properties and the facts as to the efficiency of their operations and the need for various facilities.

Jurisdiction of I. C. C.

During the consideration of the jurisdiction and operation of the I. C. C. the league members concurred in the opinion that professional employees of the Interstate Commerce Commission be exempt from the provisions of the classification law and that the Interstate Commerce Commission be given broad discretion to adjust the compensation for its professional employees and that the salary limits be increased. It was felt that the present law confers upon outside agencies the right to determine the classification and compensation of all professional employees of the commission. This not only hampers the commission in building up the most efficient organization but frequently discourages the employees and causes a greater loss through resignation than would otherwise result.

It was also felt that an amendment should be made to the Interstate Commerce Act to provide that the commission may delegate to a member or members or to an employee or employees the performance of duties imposed upon it and authorize the delegated persons to take action in behalf of the commission which action may be subject to review by the commission upon the protest of any interested party. It was felt the commission would not delegate the decision of formal docket cases under such an authority but there are numerous incidental duties which can be so delegated. For example, tariff interpretations and compliance with the requisites as to tariff compilation and publication are subjects which might well be handled to conclusion by subordinates, so long as the right of review is preserved to the interested parties.

The league favored steps toward the formation of a bar to practice before the Interstate Commerce Commission and will request the commission to prescribe qualifications for admission to practice before the commission in formal proceedings where the parties appear as representatives or attorneys for firms by whom they are not regularly employed.

Hoch-Smith Resolution

The league favored the repeal of the Hoch-Smith resolution, believing that the numerous investigations which have been promulgated in pursuance of the resolution have practically frozen the rate structure of the country and that these general investigations prevent the determination of specific complaints and adjustments and have a deleterious effect upon industry in general. It was felt that the commission should undertake to decide each formal complaint as promptly as possible without reference to the general investigations and without prejudice as to what may be found in the general investigations, except where the interested parties desire that the complaint in question be incorporated in the general investigations. The resolution should be repealed without prejudice to the right of the commission to complete its investigations and study as to the general relationship of rates.

Panama Canal Should Amortize Investment

The league is of the opinion that it is fair that Panama Canal tolls should be increased to a basis which will pay operating expenses and amortize the investment within a reasonable period of time without interfering with or unduly burdening the traffic moving through the canal. The Panama Canal rates should equal those of the Suez Canal.

The league also felt that it is fair as a general prin-

ciple that where practicable there should be some charge for the use of facilities provided for water carriers but recognized great difficulties in the way of carrying out such a general policy. No plan was suggested, but it was believed that eventually some form of tax will have to be devised to meet the situation.

Government regulation of common carriers by water was not deemed advisable as conditions surrounding water transportation are widely different than those connected with transportation by rail. There is nothing monopolistic in the carrying of freight by water. It is naturally a highly competitive business conducted in small flexible units in which freedom of contract and movement are essential to successful and economical operation. Common carriers by water must compete with private carriers which are not subject to regulation. On inland waterways regulation might seriously hamper development during pioneering stages. Coastal and intercoastal commerce are related to foreign trade. It is questionable whether the public would get any substantial benefit out of the regulation of water carriers.

However, to encourage full and free competition between rail and water commerce, the league felt that rail carriers should be given a greater latitude under the fourth section of the Interstate Commerce Act to meet competition of water carriers so that in cases where it may be determined by the Interstate Commerce Commission to be in the public interests and beneficial to rail traffic and not destructive or unduly disadvantageous to commerce by water, common carriers by rail be allowed to make competitive rates from and to points where water competition exists without regard to rates at intermediate points upon their lines where such water competition does not exist.

Congressman Newton Outlines Needed Amendments

Congressman Newton, who is a member of the Interstate Commerce Committee of the House of Representatives and chairman of the subcommittee in charge of amendments to the Interstate Commerce Act, outlined changes in the Interstate Commerce Act which he will urge at the next session of Congress. He took as his main theme the belief that more latitude should be given the railroads in allowing them to manage their own affairs. While referring to the Transportation Act of 1920 as the "greatest piece of legislation since the World war" he declared it should be amended in four respects.

The consolidation provisions of the Transportation Act received first consideration by Mr. Newton. He asserted that consolidation as it is permitted under Paragraph 2, Section 5, cannot truly be said to protect the public interest. A number of large systems have been planned which look fine in theory but will not produce the desired results in practice, he said, without the added positive legislation and Transportation Act amendments tc guide the details of consolidation. In Mr. Newton's opinion Congress should lay down certain well defined tests to be applied to the railroads which come before the government asking for permission to consolidate. Each of these tests should be designed primarily to determine the extent to which the public interest will be preserved in the particular merger, he explained.

The four tests described by Congressman Newton are: (1) will the merger enable the railroads involved to provide the public with a better balanced system than when operated individually; (2) will it simplify government regulation of the railroads; (3) will it make for increased economy and efficiency of operation; (4) will existing carrier competition in service be preserved. He stressed the latter test at some length, stating that, even though other factors were favorable to consolidation, no merger should be permitted if by that action existing carrier competition in service would be unduly lessened and the public interest illy protected. Mr. Newton expressed whole hearted sympathy with voluntary consolidation and at the same time declared himself against the enactment of any measures which will place consolidation on a compulsory basis, saying that there is no one in Washington who can devise a plan that can be fairly super-imposed upon all the railroads.

Congress must consider the repeal of the recapture provisions of the Transportation Act along with a modification of Section 15-A in order to lessen the "superguardianship which the Interstate Commerce Commission now maintains over the railroads," Mr. Newton said. Section 15-A served a most useful purpose during the period immediately following federal control when railroad credit was in need of a guaranty but now that it is no longer needed, it should be changed, he said, although he advocated no particular method by which the modification should be effected. It is Mr. Newton's belief that the recapture provision, like an excess profits' tax, penalizes efficiency and the economical administration of a railway's affairs and that railroad managers should be given an opportunity to exercise greater discretion over their own business.

If the practice of the Interstate Commerce Commission in denying railroads the right to reduce rates, solely on the ground that the present rate structure would be disturbed, continues, it will make that body the "economic autocrat of the country," stated Mr. Newton, in explaining the changes that should be made in rate legislation and the jurisdiction of the commission. This power to fix a minimum rate is a tremendous force which should be used sparingly and should not be vested in the I. C. C. without restrictions, he continued, showing that under present laws the reasons for fixing a minimum rate are substantially the same as those which apply in the fixing of a maximum rate. The burden of proof ought to rest upon the party objecting to the lower rate as it is reasonable to assume that a railway knows its business and the consequences of the reduction of a rate.

Mr. Splawn Says Government Operation Unsatisfactory

"Since our government after the World War returned the railroads to their owners, there has been such satisfactory improvement in service, accompanied by reduction in rates, that many thoughtful people have concluded that there is no danger that agitation for government ownership of railroods will be revived in the United States," said Mr. Splawn. "Newspaper reports within the past months are to the effect that a United Sates senator and a distinguished member of the Interstate Commerce Commission have come out openely for government ownership. It is entirely possible that we are upon the eve of a revival of this agitation. This is not because of any well-founded or wide-spread discontent with private ownership and operation of our railroads, but rather because we may be precipitated into an unnecessary and bitter controversy over the valuation of our railroads. For forty years the Commission has functioned without such a valuation. Even with the valuation, the Commission will be compelled to consider costs of operation, earnings, the transportation needs of the country, and net operating revenues necessary to afford the carriers a basis of credit which will enable them to respond to the demands for increased or improved transportation facilities. Whenever the arbitrary valuation of the roads gets in the way of any order needed to assure sound basis of credit, the valuation would have to be revised.

"My conclusion is that if we require the Commission to go ahead with valuation to an ultimate finding in the case of each carrier and of all carriers collectively, we will thereby bring upon ourselves much unnecessary worry, including education for government ownership. However, if we avoid the occasion for agitation for government ownership of railroads, that will almost certainly arise, if the Commission concludes its work of valuation and is required by law to use the valuation in determining the rate base, changes in our economic or political situation may at any time provoke a demand for government

ownership. This being true, we may well consider the experience of countries which own their railroads."

Belgium and Holland

In support of his statements he cited several cases of foreign railways, first considering Belgium and Holland, two countries where the density of population, area, and railway mileage in 1913 were comparatively the same.

"In Holland," he continued, "the roads were, while owned by the state, operated by private companies; in Belgium, for the most part, the railroads are both owned by the state and operated by the government. Construction of railroads was begun in Belgium soon after the secession of that country from Holland. In order to prevent Dutch capitalists from building railroads, King Leopold and his ministers decided that in the interest of Belgian independence railroads should not be in private hands, which in their judgment would mean Dutch hands.

"For a time there was some development of private roads in Belgium and competition between state-owned and privately owned railroads. The state had somewhat better routes, but the advantages possessed by private companies just about offset this difference. The struggle between the state and private roads established in Belgium very low passenger and freight rates, and brought about great increase in efficiency of operation. After the state purchase of rival lines and acquisition a virtual monopoly, there seems to have been a dimunition of activity and a tendency towards slackness of management. There was considerable lowering of profits without corresponding change of rates. There is open complaint that the connection between the Belgium railroads and politics has produced bad results. The opponents of the party in power claim that their long tenure is largely due to the patronage and influence which the railroads give them. The Belgian lines employ 50 per cent more persons per mile of line than do the French roads which operate in Belgium. It is also contended that train service in Belgium is inferior to that in neighboring countries. Germany, at one time, threatened to divert the mail by way of Holland unless the service was improved. In Belgium the railway budget is inextricably entangled with the state budget. In the selection of appointees to vacant places in the railway service, the government has opposed the competition of a well ordered civil service and has rather favored appointments from lists recommended by senators, deputies and priests. As an example of political entanglements in railway managements, there is the case of a telephone order by the minister just before the election of June, 1912, ordering an increase in wages to be retroactive to January.

France

"Under the leadership of Gambetta, France was committed to a policy of nationalizing the railroads. In 1883 Gambetta died, and by that time it was becoming apparent to the French people that they could not stand the strain of their burden of taxation and of schemes for acquiring and extending railroads. All the railway mileage, except some lines in the Southwest, aggregating about 1,900 miles, was turned back to private ownership. In 1906, there was a revival of agitation in France for government ownership of railroads. The western lines were financially weak; traffic on them was very light, because they served an agricultural country, and the River Seine took the profitable traffic between Paris and Havre. Equipment on these lines was poor; the employees of the western railways were in favor of government ownership. Socialists were clamorous for it, but the representatives in parliaments from the districts served by the western lines were opposed to government ownership. After two or three years' discussion, the senate passed a bill for the purchase of the western railways of the state, only after Clemenceau had threatened to resign if the bill should fail. This acquisition increased the mileage owned and operated by the government to more than 5,000 miles. The business men of France had almost unanimously opposed this acquisition. The results of government ownership soon confirmed their worst fears. Under company management, the operating ratio of the western lines had varied from 56 to 68 per cent. During the fourth year of government ownership, the operating ratio had climbed to 89 per cent. Between 1908 and 1912 the receipts of the western railroads rose $8,000,000, and expenditures increased $15,000,000. Although wages were increased more rapidly on state lines than on private lines, the efficiency of labor did not seem to increase in proportion to the increase in advantages in its favor.

Germany

"At the time that railways began to be built the smaller states in Germany were regarded as the personal property of their respective sovereigns. Quite naturally the princes of these countries built railroads for the development of their estates, or considered the advisability of such construction. During the first years of railway building in Germany, there was a decided tendency for private capital to furnish roads in the more commercially developed parts of Germany. In the more backward agricultural districts the state built the railroads. After the Franco-Prussian War, there was a decided change in railway policy throughout the German State. Bismarck was at the helm as the empire builder, and he conceived the railroads as an important adjunct of the government, the earnings of which might contribute to the public treasury, while the roads might be operated with political and military consideration as determining factors in their management. The southern German states were not particularly happy over the aggrandizement of Prussia, and rather than have the railroads within their borders acquired by the empire in furtherance of Bismarck's plan, such states as Bavaria and Saxony took over for themselves private lines within their borders. Under Bismarck's leadership Prussia acquired Prussian lines for the Prussian government.

"One would expect that under German management and with the German genius for organization, and particularly in view of the successful efforts of the government to make the railroads contribute to the public income, government ownership and operation in Germany would produce a lower operating ratio than private operation in France. During the year before the war, the operating ratio of the five French private lines was 58.5 per cent, whereas the ratio in Prussia averaged 66 per cent. While the French showed a lower operating ratio, they also made a better showing with respect to reduction of freight rates for some 10 years before the World War.

Great Britain

"In England from the beginning, railroads have been owned and operated by private companies. These companies have received practically no public aid. In 1843 there were 71 lines in England, averaging in length about 30 miles. From 1844 to 1847, 637 companies were chartered. Consolidation went along, one company absorbing another, until about 1872 when 13,000 miles of railroad were being operated by about 12 companies.

"The serious economic depression that followed the World War and the consequent falling off in tonnage on the British railways, coupled with the heavy deficits that had accumulated from war-time management, brought about most serious study of the relations that should obtain between the state and the railroad. The English authority, Sir William Ackworth, came to the conclusion that closer connection than has hitherto existed between the state and its railroads must come, both in England and in the United States.

"The English people refused to enter upon the experiment of government ownership. Under the leadership of the Ministry of Transport, headed by Sir Eric Geddes, a bill was drawn and carried through parliament providing for the return of the railroads to their private owners. This law required the consolidation of the railroads of England, Scotland and Wales into four systems. Authority over rates existed in a railway rates tribunal consisting of three permanent members: The chairman of the tribunal is to be a railroad man, one of the members a lawyer, and the other a business man. This tribunal is clothed with very large powers. The law provides for the adjustment of labor disputes through a central wages board and a national wages board; the latter to consider appeals from the former. Under this law the railroads of Great Britain were returned to their owners on August 16, 1921. They immediately faced the greatest difficulties. Existing rates were considered to be higher than the traffic could bear. Wages had been increased about 200 per cent above what they were before the war. There had been an abnormal decrease in traffic as the result of serious economic disturbances throughout western Europe. English business men and investors doubted the wisdom of compulsory consolidation.

"With a revival of industry, the British roads began to make better showings, particularly in 1925. Then came the railway strikes coincident with the strike of the miners in 1926. These strikes greatly reduced the earnings of the British railways for that year. It was estimated that the revenues of the four systems in 1926 as compared with the revenues in 1925 were decreased more than $30,000,000. However, the complete failure of the strike of the railway employees enabled the British companies to make adjustments that will enable them to meet with more success the financial difficulties which they inherited in the years following the war.

Canada

"Government ownership has never been an avowed policy of the Canadian government, although it now operates an extensive railway system. The first road constructed by the state was solely an integral part of the bargain of confederation. The government built the National Transcontinental with the idea that the Grand Trunk could operate it, but for financial reasons

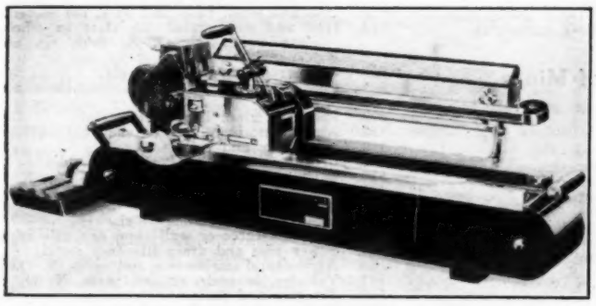
the Grand Trunk could not take it off the government's hands. After the outbreak of the war, the Canadian Northern was in a bad way financially and had no one to fall back on. By reason of guarantees of bonds of the provinces and the dominion, taking over the Canadian Northern was practically compulsory.

"The Canadian Northern, after it was taken over by the government in 1917, was operated under the old corporate machinery, by a reorganized board appointed by the government. For operating purposes, the Intercolonial, the National Transcontinental and Grand Trunk Pacific have been added to the Canadian Northern. In 1919 there was a deficit in the operation of these lines of $48,000,000, and in 1920 of $70,000,000. It is now claimed that the lines are making much better financial showing, though there are some who contend that this is due in part to accounting devices and not to real earnings.

A Ticket Office Printing Machine for Railroads

A NEW ticket printing machine designed for use in railroad ticket offices has been placed on the market by the Ohmer Fare Register Company, Dayton, Ohio. The machine is designed to take the place of a pre-printed stock of card tickets, eliminating the expense of maintaining such a supply, simplifying auditing and checking and lessening chances for fraud and error.

The machine is manufactured in a number of sizes,



One of the Smaller Models of the Ticket Printer

capable of printing tickets for from 100 to 2,500 different destinations. The machine, in printing the ticket, also prints on it the amount of the fare, the distance in miles and records the information on two "control" tapes within the machine. One of these tapes is accessible to the ticket seller at all times and is used by him for the purpose of checking and balancing his receipts. The other control tape is accessible to the auditor only or his authorized representative. It is removable at such times as may be desired for checking and is filed as a permanent detailed record of ticket sales. In addition to the control tape, the machine is provided with segregated totalizers which show the number of tickets sold to each destination. Another automatic counter makes the total number of tickets sold visible at all times, thus simplifying the building up of traffic statistics.

The machine is so designed that adjustments to allow for sudden changes in tariffs can be quickly made, as well as any other changes to meet new conditions—without at the same time involving the loss occasioned by the destruction of a pre-printed supply of tickets and the printing of a new supply.

The ticket seller upon starting his work prints and issues a "control ticket" (see illustration) upon which he enters his name and the time of starting. At the end of his tour of duty he issues a similar ticket upon which he enters the day's receipts and his name. He then becomes responsible for all tickets issued shown by the consecutive numbers between those of the beginning and the closing control tickets. The auditor's duplicate control tape bears the record of these control tickets, so that no possible operation of the machine can go unnoted. The change of ticket sellers is accomplished quickly, without any extended checking and balancing. The diagram herewith shows the tickets and records made for a period of duty of an individual ticket seller. The "control tickets" are shown, together with the record of the control tape. On this tape the first figure is the price of the ticket, the second figure is the arbitrary number assigned to the station, and the third figure is the ticket serial number. In the auditor's record shown below, the figures with a dash on either side are the destination station numbers, while the figures above the station num-

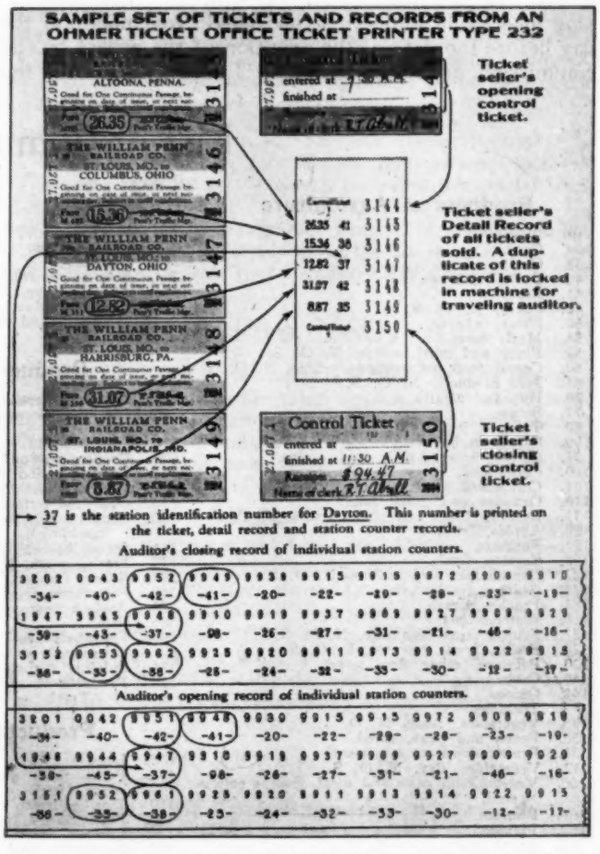

SAMPLE SET OF TICKETS AND RECORDS FROM AN OHMER TICKET OFFICE TICKET PRINTER TYPE 232
ALTOONA, PENNA.
26.35
COLUMBUS, OHIO
15.36
DAYTON, OHIO
12.82
HARRISBURG, PA.
31.07
INDIANAPOLIS, IND.
8.87
Control Ticket
entered at
finished at 11:30 A.M.
Receipts $94.47
Name of clerk
Ticket seller's opening control ticket.
Ticket seller's Detail Record of all tickets sold. A duplicate of this record is locked in machine for traveling auditor.
Ticket seller's closing control ticket.
37 is the station identification number for Dayton. This number is printed on the ticket, detail record and station counter records.
Auditor's closing record of individual station counters.
Auditor's opening record of individual station counters.

Diagram Showing Tickets and Records Made by the Ticket Printer

bers represent total ticket sales to those points. It will be noted, for instance, that 37 is the station number for Dayton and that the opening record gives the total of 9947 above this number. The closing record gives 9948, indicating the sale of one ticket to this destination. Had 20 tickets been sold to Dayton, the total figure would read 9967.

It is believed that the machine, in addition to simplifying auditing and reducing the opportunities for fraud and error, should also effect economy in necessary ticket office space and in the number of employees. In addition to the hand manipulated type of ticket printer manufactured in various sizes under the type No. 232, the manufacturer also has an electrically operated rapid acting machine, No. 233, which will print and issue from 150 to 250 tickets per minute.

Additional Traffic Statistics Asked by I. C. C.

WASHINGTON, D. C.

THE Interstate Commerce Commission on November 29 made public two orders served on the railroads requiring the furnishing of additional freight commodity statistics beginning January 1, 1928, including a statement of the revenue derived from each class of commodities, and also a special statement showing traffic density by states or geographical divisions for the year 1927. That the commission was considering requiring the additional commodity statistics was reported in the *Railway Age* of November 19, with an outline of some of the objections which have been made against the new plan by railway officers. The commission also made public a letter dated November 21, the day before the date of the adoption of the orders by the commission, addressed by M. O. Lorenz, director of the Bureau of Statistics, to the chief accounting officers of the carriers, in explanation of the orders in advance of their service.

The order as to commodity statistics increases the number of commodity classifications from 70 to 158. The Class I carriers are required to furnish quarterly the following information for each commodity class:

Revenue freight originating:
  Terminating on line—
    Number of carloads.
    Number of tons (2,000 lb.).
  Delivered to connecting carriers—
    Number of carloads.
    Number of tons.
Revenue freight received from connecting carriers:
  Terminating on line—
    Number of carloads.
    Number of tons.
  Delivered to connecting carriers—
    Number of carloads.
    Number of tons.
Total revenue freight carried:
  Number of carloads.
  Number of tons.
Freight revenue.

The new list of commodity classes follows:

List of Commodity Classes

Products of Agriculture

10. Wheat.
20. Corn.
30. Oats.
40. Barley and rye.
41. Rice.
42. Grain, N. O. S.
50. Flour, wheat.
51. Meal, corn.
52. Flour and meal, edible, N. O. S.
60. Cereal food preparations, edible, N. O. S.
61. Mill products, N. O. S.
70. Hay and alfalfa.
71. Straw.
80. Tobacco, leaf.
90. Cotton in bales.
91. Cotton linters, noils and regins.
100. Cottonseed.
101. Cottonseed meal and cake.
110. Oranges and grape fruit.
111. Lemons, limes and citrus fruits, N. O. S.
120. Apples, fresh.
121. Bananas.
122. Berries, fresh.
123. Cantaloupes and melons, N. O. S.
124. Grapes, fresh.
125. Peaches, fresh.
126. Watermelons.
127. Fruits, fresh, domestic, N. O. S.
128. Fruits, fresh, tropical, N. O. S.
130. Potatoes, other than sweet.
140. Cabbage.
141. Onions.
142. Tomatoes.
143. Vegetables, fresh, N. O. S.
150. Beans and peas, dried.
151. Fruits, dried or evaporated.
152. Vegetables, dry, N. O. S.
160. Vegetable-oil cake and meal, except cottonseed.
161. Peanuts.
162. Flaxseed.
163. Sugar beets.
164. Products of agriculture, N. O. S.
Total.

Animals and Products

170. Horses, mules, ponies and asses.
180. Cattle and calves, single-deck.
181. Calves, double-deck.
190. Sheep and goats, single-deck.
191. Sheep and goats, double-deck.
200. Hogs, single-deck.
201. Hogs, double-deck.
210. Fresh meats, N. O. S.
220. Meats, cured, dried or smoked.
221. Butterine and margarine.
222. Packing-house products, edible, N. O. S., not including canned meats.
230. Poultry, live.
231. Poultry, dressed.
240. Eggs.
250. Butter.
251. Cheese.
260. Wool.
270. Hides, green.
271. Leather.
280. Fish or sea-animal oil.
281. Animals, live, N. O. S.
282. Animal products, N. O. S. (other than fertilizers and fertilizer materials).
Total.

Products of Mines

290. Anthracite coal.
300. Bituminous coal.
310. Coke.
320. Iron ore.
330. Copper ore and concentrates.
331. Lead ore and concentrates.
332. Zinc ore and concentrates.
333. Ores and concentrates, N. O. S.
350. Gravel and sand (other than glass or moulding).
351. Stone, broken, ground or crushed.
352. Stone, rough, N. O. S.
353. Stone, finished, N. O. S.
360. Petroleum, crude.
370. Asphalt (natural, by-product or petroleum).
380. Salt.
390. Phosphate rock, crude (ground or not ground).
391. Sulphur (brimstone).
392 Products of mines, N. O. S.
Total.

Products of Forests

400. Logs.
401. Posts, poles and piling.
402. Wood (fuel).
410. Ties, railroad.
420. Pulp wood.
430. Lumber, shingles and lath.
431. Box, crate and cooperage materials.
432. Veneer and built-up wood.
440. Rosin.
441. Turpentine.
442. Crude rubber (not reclaimed).
443. Products of forests, N. O. S.
Total.

Manufactures and Miscellaneous

450. Petroleum oils, refined, and all other gasolines.
451. Fuel, road, and petroleum residual oils, N. O. S.
452. Lubricating oils and greases.
453. Petroleum products, N. O. S.
460. Cottonseed oil.
461. Linseed oil.
462. Vegetable oils, N. O. S.
470. Sugar (beet or cane).
471. Table sirups and edible molasses.
472. Molasses, blackstrap and beet residual.
490. Iron, pig.
491. Iron and steel, rated 6th class in official classification, N. O. S.
500. Rails, fastenings, frogs and switches.
510. Cast-iron pipe and fittings.
511. Iron and steel pipe and fittings, N. O. S.
512. Iron and steel: nails and wire, not woven.
513. Iron and steel, rated 5th class in official classification, N. O. S. (also tin and terne plate).
520. Copper: ingot, matte and pig.
521. Copper, brass and bronze: bar, sheet and pipe.
522. Lead and zinc: ingot, pig or bar.
523. Aluminum: ingot, pig or slab.
530. Machinery and boilers.
540. Cement, natural or Portland, building.
550. Brick, common.
551. Brick, N. O. S., and building tile.
552. Artificial stone, N. O. S.
560. Lime, common (quick or slack).
561. Plaster (stucco or wall) and dry kalsomine.
570. Sewer pipe and drain tile (not metal).
580. Agricultural implements and parts, N. O. S.
581. Vehicles, horse-drawn and parts, N. O. S.
582. Tractors and parts.
583. Railway car wheels, axles and trucks.
590. Automobiles (passenger).
591. Autotrucks.
592. Automobiles and autotrucks, K. D. and parts, N. O. S.
593. Automobile and autotruck tires.
610. Furniture, metal.
611. Furniture, other than metal.
620. Beverages.
630. Ice.
640. Fertilizers, N. O. S.
650. Newsprint paper.
651. Printing paper, N. O. S.
660. Alcohol, denatured or wood.
661. Sulphuric acid.
662. Explosives, N. O. S.
670. Cotton cloth and cotton fabrics, N. O. S.
671. Bagging and bags, burlap, gunny or jute.
680. Canned food products, N. O. S.
690. Tobacco, manufactured products.
691. Paints in oil and varnishes.
692. Furnace slag.
693. Scrap iron and scrap steel.
694. Paper bags and wrapping paper.
695. Paperboard, pulpboard, and wallboard (paper).
696. Building paper and prepared roofing materials.
697. Building woodwork (millwork).
698. Soap and washing compounds.
699. Glass, flat other than plate.
700. Glass: bottles, jars, and jelly glasses.
701. Manufactures and miscellaneous, N. O. S.
Total.
Grand Total, Carload Traffic.
710. All L. C. L. freight.
Grand Total, Carload and L. C. L. Traffic.

Traffic Density Statement

The special traffic density statement, to be furnished by April 1 by carriers having annual revenues in excess of $1,000,000 for 1927, calls for information as to the average number of miles of road and of main tracks operated, and the revenue passenger-miles and revenue ton-miles in total and as the average per mile of road and per mile of main tracks. The information is to be furnished separately for each of 45 state or geographical divisions, of which 27 are states and the others are subdivisions of states or combinations of states and parts of states.

Letters and Books

Bad Advertising

CHICAGO.

TO THE EDITOR:

Referring to the editorial in the *Railway Age* of October 29 on the subject of passenger business of the railroads, entitled, "Service Improves, Business Declines." The writer was wondering whether the thought has ever occurred to you that whenever a passenger buys a ticket, his attention is most forcibly called to the fact that he may have an accident. I am referring to the fact that almost invariably when one buys a ticket, he is asked whether he wants insurance, and it seems to me this brings to the passenger's mind the fact that his trip is likely to be risky.

From the standpoint of salesmanship, it seems to me this is one of the poorest sales talks the railroads could give, if they want to make the passenger feel that travel by railroad is safe.

A. FLETCHER MARSH,
President, Marsh & Truman Lumber Co.

Books and Articles of Special Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

Books and Pamphlets

Cinquantenaire de la Cie. Internationale des Wagons-Lits et des Grands Express Européens 1876-1926. Several chapters in transportation achievement that have not hitherto been brought between two covers. A large map shows the extent of the present services of the International Sleeping Car Company, while those who want the dates of the inauguration of the Orient, or the Simplon, or the Sud, or the Golden Arrow, or the Trans-Manchurian and other European and Asiatic expresses can find then in this publication which is illustrated, and issued in honor of the 50th anniversary of the company. 46 p. Pub. by the International Sleeping Car Company, Paris, France.

A Railway Tour Through South America, by Charles Travis. An illustrated account of the outstanding features of South American railway construction and operation observed on a recent trip. 35 p. Pub. by Great Western Railway (London) Lecture and Debating Society, London, England.

Report of a Survey of Transportation on the State Highway System of Ohio, by Bureau of Public Roads, U. S. Dept. of Agriculture and Ohio Department of Highways and Public Works. Development of highway transport, relation to railway transport, present-day characteristics and problems. Illustrations and charts. 155 p. Pub. by Bureau of Public Roads, Washington, D. C. *Apply.*

Periodical Articles

Air-Rail Lines May Span U. S., by Wm. P. MacCracken, Jr. Map of projected air-rail routes and outline of proposed plans of railways and the government to reduce transcontinental time by 40 hours. Popular Science Monthly, December, 1927, p. 12-13.

A Few of the Fruits of Combined Capital, by James Francis Burke. Railroads are included in the list of great projects financed by combined capital. Commercial and Financial Chronicle, American Bankers' Asso., Convention Section, November 12, 1927, p. 65-69.

Post-War Continental Waterway Developments, by A. V. Bellamy. Mileage, characteristics, and administration. Journal of the Institute of Transport, November, 1927, p. 42-46.

The Railroad's Place in the Economic Scheme of Business, by Walter L. Ross. What transportation accomplishes in our lives. An address by the president of the Nickel Plate. The Torch, November, 1927, p. 2-3, 14-17.

Looking Backward

Fifty Years Ago

By a decision of the Court of Common Pleas of Mahoning county, Ohio, the Pittsburgh & Lake Erie, which is projected to extend from Youngstown, Ohio, to Pittsburgh, Pa., 68 miles, has acquired the canal bed of the abandoned Pennsylvania and Ohio Canal for use as a right of way from Youngstown to the Pennsylvania state line.—*Railroad Gazette,* November 30, 1877.

In his annual report the secretary of the interior recommends that a special bureau be established in his department for the supervision of the accounts of the Union Pacific and other Pacific railway companies. It would protect the interests of the government in these railroads, he states, and furnish valuable information in railroad matters to other departments of the government. —*Railway Age,* December 6, 1877.

The report of the Erie for the year ending September 30 shows that in spite of the fact that the gross earnings increased 7¼ per cent from the previous year, the entire receipts fell short of expenses and interest on bonds by about $1,301,000. The reason for this deficit is apparent when it is pointed out that the stock and bonded indebtedness on the 526 miles owned averages $271,429 per mile of road.—*Railway Age,* December 6, 1877.

Twenty-Five Years Ago

President Roosevelt in his message sent to Congress this week favors the amendment to the safety appliance law which would gradually extend the jurisdiction of the power brake law to ultimately include all freight cars in the United States and require the use of automatic couplers on locomotives, cabooses and snow plows.—*Railroad Gazette,* December 5, 1902.

"I am a believer in freight. The passenger business is the dress parade part of the railroad business. We build fine coaches and throw them away for finer coaches in a friendly competition with each other. We erect mammoth stations and tear them down to erect larger stations. Every business has its display features, and this is ours. More money is spent in these luxuries than is ever received in fares."—L. F. Loree, president of the Baltimore & Ohio, in a statement pledging his support for the Washington Union station.—*Railroad Gazette,* December 5, 1902.

Ten Years Ago

The Railroads' War Board on November 24 adopted the most revolutionary measures it has undertaken since its organization in order to relieve the congestion of traffic on eastern railways. It directed that all available facilities on all railroads east of Chicago be pooled to the extent necessary to furnish maximum freight movement. The operating vice-presidents of the eastern lines have been appointed a committee to operate as a unit all the lines involved.—*Railway Age Gazette,* November 30, 1917.

Executives of the four railroad brotherhoods conferred for two hours with President Wilson on November 22 on the demands of the train service employees for higher wages. They told the President that they wanted more money and would consider any peaceable method that might be proposed for giving it to them. Fairfax Harrison, chairman of the Railroads' War Board, placed the interests of the railroads "unreservedly in the hands of the President for the protection of the public interest."—*Railway Age Gazette,* November 30, 1917.

THE THANKSGIVING DIVIDEND declared by the Pennsylvania Railroad for the benefit of its 142,076 stockholders, has just been paid; 35 mail sacks full; and bearing postage stamps valued at $2,800.

Odds and Ends of Railroading

The Cincinnati Enquirer has discovered the following interesting information in a folder describing a newly outfitted train:

"Shower bath for women is in the observation car."

This is, at least, one way of meeting highway competition.

On the subject of railroad fishermen, J. M. Prickett, superintendent of personnel of the Kansas City Southern, sends us a newspaper illustration showing G. M. Myers, a K. C. S. director, standing alongside a 175-lb. tarpon which he landed. "If a director of our railroad," asks Mr. Prickett, "can catch a fish this size, what do you suppose our ordinary employees are capable of?"

An early contributor to the *Railway Age* was John Greenleaf Whittier, who in a poem printed in the issue of November 8, 1877, recounts in lines that fairly drip with heroic fervor the death of "Conductor Bradley" in a train wreck. Bradley's brave deed is aptly pictured in the following two of the ten verses:

"Sank with the brake he grasped, just where he stood
To do the uttermost a brave man could,
And die, if need be, as a brave man should.

* * * *

"What heard they? Lo! the ghastly lips of pain,
Dead to all thought save duty's, move again—
'Put on the signal for the other train.'"

The Cassville & Exeter is said to be the shortest steam railroad in the United States. On the Cassville & Exeter trains never collide. There is only one train. And there are no strikes or labor troubles. The president, the general manager and the locomotive engineer stand strictly on the same footing. They can't help it. They are one and the same person and have the same feet. Dave Dingler is all three of them. Dingler has been a railroader more than 40 years. He has been section foreman, shop assistant, fireman, locomotive engineer and now, although he is 63 and president of the company, half the stock of which he owns, he still stays with the cab. Dingler and James C. Ault, his partner in the railroad, do not favor the suppression of women. Both are married and Mrs. Dingler is vice-president of the company and Mrs. Ault is treasurer. First of all, however, the ladies are housewives. With them managing their homes takes precedence over railroading.

A Sports Terminal

Big business makes strange bedfellows. "Tex" Rickard staged the battle of the century less than two short months ago and here he is a partner of the Boston & Maine Railroad in a $10,000,000 project to build in Boston a combined railroad terminal and Madison Square Garden, with hotel attachment. This ambitious alliance reminds the New York *Herald-Tribune* of "those mammoth skyscraper churches, projected or begun, which, with auditoriums, gymnasiums, swimming pools and family apartments are designed to combine religion with real estate improvement. The principle in each case is much the same. The railroad provides the means by which people flock to sporting events. Why shouldn't it share in the gate receipts?

"When Alvah Crocker, president of the Fitchburg Railroad, built the old granite station in Boston in 1847 he apparently had somewhat the same idea in mind for he provided in it an auditorium where, in 1850, Jenny Lind sang. But unfortunately he had no "Tex" Rickard to keep things humming . . ."

Switchmen and Trainmen as Red Caps

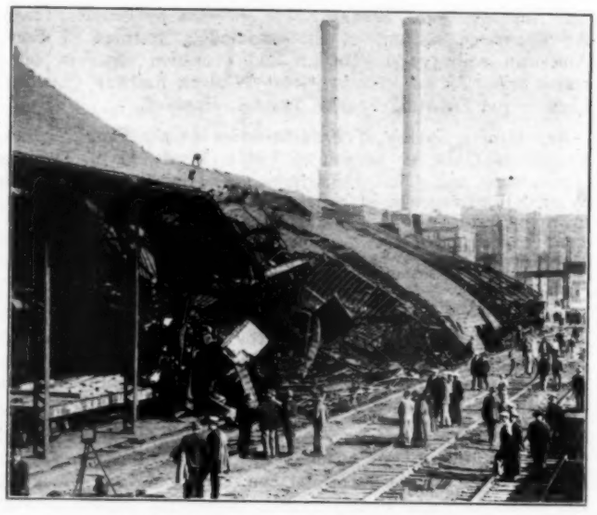
A complaint which will seem queer to American railroad men, who are strangers to the tipping system, was recently registered in the Railway Review (London), the British railway union paper. A reader wrote to the editor complaining that station employees were making a habit of staying overtime without pay simply to earn tips. His letters follows in part:

"May I appeal to the hundreds of men in the traffic department who make it a practice of coming to Waterloo (Station) for as many as eight or nine hours before commencing or after finishing their duty at the station where they are employed for the purpose of what is known as 'fluffing.' Surely these men are not fit to carry out their actual duties in a way to create the safety that we all so desire. I desire to say that a bad example is shown by the traffic grades stationed at Waterloo, who are also guilty of coming on before their booked turn, and remaining hours after their booked turn, for the purpose of exploiting the tipping system, and also keeping a number of men out of employment in consequence.

"In fact the tipping system has got such a hold at Waterloo that it is a common thing to see guards, foreman porters, and shunters leaving their own work to chance to do the job where a tip might be forthcoming. Now my advice to the shunter is, help your mate, do not let him perform a shunt where it requires two men. To the guard, look after your train, see your vans are cleared or loaded properly, look around your train to see the draw gear, doors, locks, etc., are in good order to permit the train that you are in charge of running in safety. And to you, Mr. Foreman Porter, stay on your platform and receive the trains, see that they are properly loaded, all doors closed before giving signal to start, and give general advice to all men under your charge; do not leave this important work to chance whilst you are gone to the cab rank for the purpose of getting a tip. Let us make that popular saying, 'It's safer and quicker by rail' an actual fact. That can easily be done if we all look after our own work, or in other words mind our own business.—ONE MAN ONE JOB."

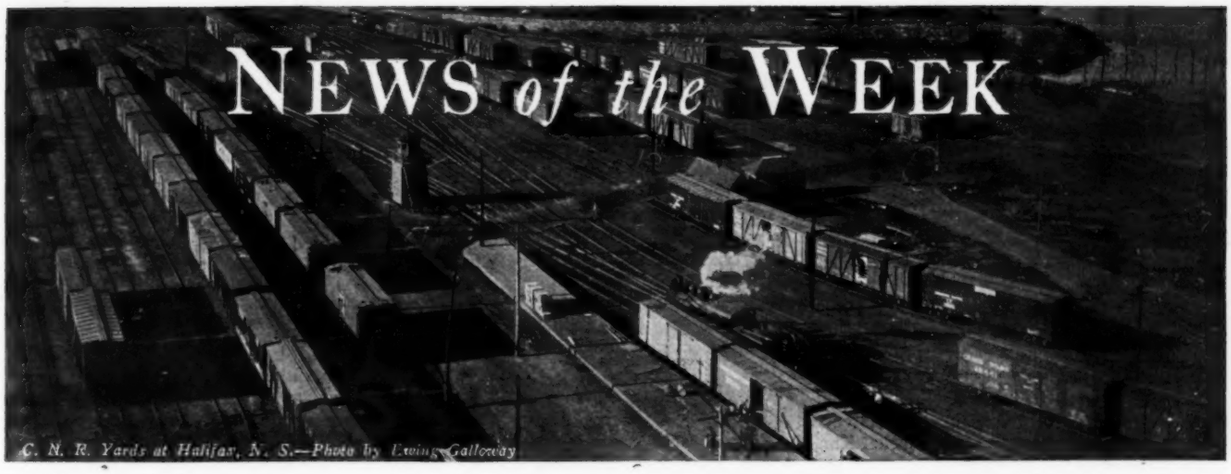
A Concrete Mixer Did This

What can happen when heavy lading on a flat-car fouls a fixed structure is illustrated in the photograph which shows the damage done to the train shed of the passenger station of the Peoria & Pekin Union at Peoria, Ill., on October 23. During the early morning hours while a concrete mixer was being moved through the station in interchange, the leg of an A-frame



What Happened to the Train Shed

projecting over the side of the car fouled the outer columns of the shed, buckling them one after another and allowing the roof to fall panel by panel, so that before the engine could be stopped fully three quarters of the shed was a wreck. Owing to the fact that the platforms were deserted at the time, no loss of life or personal injuries resulted, but the property loss is estimated at $50,000.



C. N. R. Yards at Halifax, N. S.—Photo by Ewing Galloway

THE WESTERN RAILWAY CLUB will hold its "Ladies' Night", giving a dinner and dance at the Hotel Sherman, Chicago, December 13.

THE CLEVELAND RAILWAY CLUB will hold its next meeting at the Hotel Hollenden, December 5, when a paper will be read by H. M. Tucker of the Vapor Car Heating Company, New York, on the subject, "Car Heating Problems".

THE NEW ENGLAND RAILROAD CLUB will hold its next meeting at the Copley Plaza hotel, Boston, December 13, when a paper will be read on the subject, "Freight Classification Yards", by George Hannauer, president of the Boston & Maine.

THE BOARD OF ARBITRATION which conducted hearings at Chicago during October and November on the demands of western firemen and hostlers for an increase in wages of $1 per day reconvened at Denver, Colo., on November 28 to reach a decision in the case. The various demands growing out of the basic request for an increase of $1 per day will each in turn be discussed and passed upon by the six board members. It is expected that a week to 10 days will elapse before a final agreement is obtained. According to the terms of the arbitration the final decision must be reached by December 20.

Question of I. C. C. Jurisdiction Over Porters' Tips to Be Argued

The Interstate Commerce Commission has assigned for January 11 the argument before it on the motion of the Pullman Company that it dismiss for want of jurisdiction the complaint filed by the Brotherhood of Sleeping Car Porters which had asked the commission to require the Pullman Company to desist from "encouraging" the tipping practice.

Quebec to Subsidize Lake St. John Line

Premier L. A. Taschereau of Quebec has announced that his government will grant a subsidy of $500,000 for the building of the Lake St. John Railway, a road which will aid in the development of a region rich in pulp and paper and mineral resources. According to the bill passed last session, provision is made for the government to pay $6,000 per mile for the 32 miles of the road between St. Felicien and Mistassini, and $5,000 per mile for the 75 miles between the latter place and Chute à Caron or Hebertville.

New High Records on Panama Canal

During the month of October new high records were established for traffic through the Panama Canal covering number of vessels, registered tonnage, tolls, and tons of cargo carried. The number of commercial transits, 567, exceeded by 24 the previous record of 543, made in August, 1927. The net tonnage of commercial vessels was 2,585,752 tons, greater by 69,261 tons than in the highest month previous, December, 1923. Tolls, $2,380,115.97, were $44,386.16 more than in December, 1923, the previous record month.

Testimonial to Dr. Cline

The Southern Pacific has presented a bronze tablet to Dr. Isaac M. Cline, senior meteorologist of the United States weather bureau at New Orleans. The gift is in recognition of distinguished service in safeguarding the lives and property of people and the public interests of Louisiana during the disastrous Mississippi flood. R. C. Watkins, vice-president and general manager, in presenting the tablet at a dinner in honor of Dr. Cline, paid a high compliment to the accuracy, timeliness and dependability of Dr. Cline's flood forecasts, which he said had saved thousands of lives and an immense amount of property.

To Subdue Rough Handling

An effort to organize superintendents nationally against rough handling of freight is being made by the committee appointed at the joint meeting of the Southeastern Claim Conference, the Eastern Claim Conference and the Virginia Claim Conference at Virginia Beach on September 8, to find some more direct way to reach the employees having to do with the physical handling of freight. The committee consists of J. E. Davenport (N. Y. C.), W. H. Johnson (N. & W.), and C. Baldwin (C. Ga.). They believe that organized activity of some nature, originating with superintendents, will have a greater influence upon the men who handle cars than any activity on the part of men in other branches of the service, and have written to the superintendents of all railroads asking for suggestions.

Computation of Damages Under Federal Employers' Liability Act

The Supreme Court of the United States follows its decisions in C. & O. v. Kelly, 241 U. S. 485, 491, and C. & O. v. Gainey, 241 U. S. 494, announcing the rule that in actions under the federal Employers' Liability Act "in computing the damages recoverable for the deprivation of future benefits, the principle of limiting the recovery to compensation requires that adequate allowance be made, according to circumstances, for the earning power of money; in short, that when future payments or other pecuniary benefits are to be anticipated, the verdict should be made up on the basis of their present value only." This interpretation, approved by the Supreme Court has, it is held, become an integral part of the statute, to be accepted and followed by the courts.—Gulf, Colorado & Santa Fe v. Moser. Opinion by Mr. Justice McReynolds. Decided November 21, 1927.

I. C. C. Asked to Require Automatic Hose Connectors

A delegation of officers of the brotherhoods of train service employees held an informal conference with Chairman Esch and Commissioner Taylor of the Interstate Commerce Commission on November 30 at which they urged the commission to consider the advisability of requiring the railroads to equip their cars with automatic brake-hose connectors. Such a plan has been proposed in resolutions adopted at some of the brotherhood conventions. The proposal will be laid before the commission for consideration. An impression seems to have gone abroad that this was

to be a hearing at which representatives of the railways and of the manufacturers were to be present and some people went to Washington to attend such a hearing, but it was explained that it was merely a preliminary discussion of the subject arranged at the request of the brotherhoods for the purpose of placing the subject before the commission for its consideration.

Santa Fe Clerks' Wages Increased Four Cents an Hour

Clerical employees of the Atchison, Topeka & Santa Fe have been granted an increase in wages of 4 cents an hour, equal to 6.45 per cent, through an agreement reached between the company and the general committee of the Santa Fe Association of Clerical Employees at Topeka, Kan., on November 22. The increase, which will be retroactive to August 1, 1927, and will be in effect until August 1, 1929, affects about 7,500 employees and involves an approximate additional annual expenditure by the company of $750,000. The Santa Fe Association of Clerical Employees was formed on July 1, following the withdrawal of the clerks from the Brotherhood of Railway Clerks and Freight Handlers. Some 3,000 freight handlers and other laborers are excluded from membership in the new organization. With this increase of 4 cents and an earlier increase of 2 cents an hour, clerks on this road have received increases since 1922 which are comparable to the six-cents-an-hour increase given to the Santa Fe shop employees, who are also organized under an independent union.

The Canadian Board of Adjustment

During the four years ended September 30 last the Canadian Railway Board of Adjustment No. 1 has dealt with 304 cases, of which 172 were presented by various railwaymen's organizations and 132 by the companies.

The board was established under an order-in-council on July 11, 1918, while the war was in progress, its purpose being to secure uninterrupted service on the railways.

Of the companies' cases presented for adjustment during the four years, 22 came from the C.N.R. Atlantic region, 16 from the central region, and 58 from the west. There were no cases from the C.P.R. eastern lines, 31 from the west, 1 from the Kettle Valley Railway, and one from the Esquimault & Nanaimo Railway. Three were from the T. & N. O.

Of the men's cases 17 were from the Brotherhood of Locomotive Engineers; 16 from the Firemen & Enginemen; 49 from the Conductors; 58 from the Trainmen; 22 from the Telegraphers, and 11 from the Maintenance of Way employees.

Adjustment and administrative expenses for the period totalled $31,383.80.

The Flooded Railroads

Considerable progress in the restoration of its lines since last week is reported by the Central Vermont (see map and descriptive matter on page 1051 of the *Railway Age* of November 26). The line is now restored, including ballasting, southward to a point 2 miles south of Richmond, Vt., and work on track in preparation for ballast trains is progressing rapidly as far south as Slip Hill (near Waterbury, which is 13 miles south of Richmond). The main line of the Montpelier & Wells River has now been restored, giving the C. V. access with work trains to its line at Montpelier. Likewise work has proceeded northward from White River Junction as far as Royalton, progress on this stretch since last week's report being about 7 miles. Between this point and Montpelier work of preparing the track, to be ready for ballast as soon as work trains can get through, is going on in a number of places.

The Boston & Maine, issuing its financial statement for the month of October, reporting net earnings of $578,352 as compared with $501,741 for October, 1926, states that the damage due to the floods of last month will total about $2,500,000. Adding to this the losses in revenue due to diversion of traffic, there is a prospect that the results of the floods will show in the financial statements for several months beginning with November.

The Boston & Albany, on Wednesday, November 30, completed a second track through the two-mile section of its flooded road, east of Becket, where single track operation has been necessary since November 15, following 11 days of a complete suspension over eight miles because of the flood of November 3.

Canadian Roads Show October Losses

Both the Canadian Pacific and the Canadian National showed decreases in their net earnings for the month of October. The gross earnings of the National System, excluding lines east of Levis and Diamond Junction, Que., (for which accounts are kept separately) reached a total of $25,181,542, as against $26,292,428 in October, 1926, a decrease of $1,110,886.86, equivalent to 4.23 per cent. The operating expenses totalled $17,493,538 in comparison with $17,706,757.27 in October, 1926, a decrease of $213,218, or 1.20 per cent. The net earnings for October, amounted to $7,688,003, while in October, 1926, they were $8,585,671, a decrease of $897,668. The operating ratio for October, 1927, was 69.47, while in October, 1926, it was 67.34.

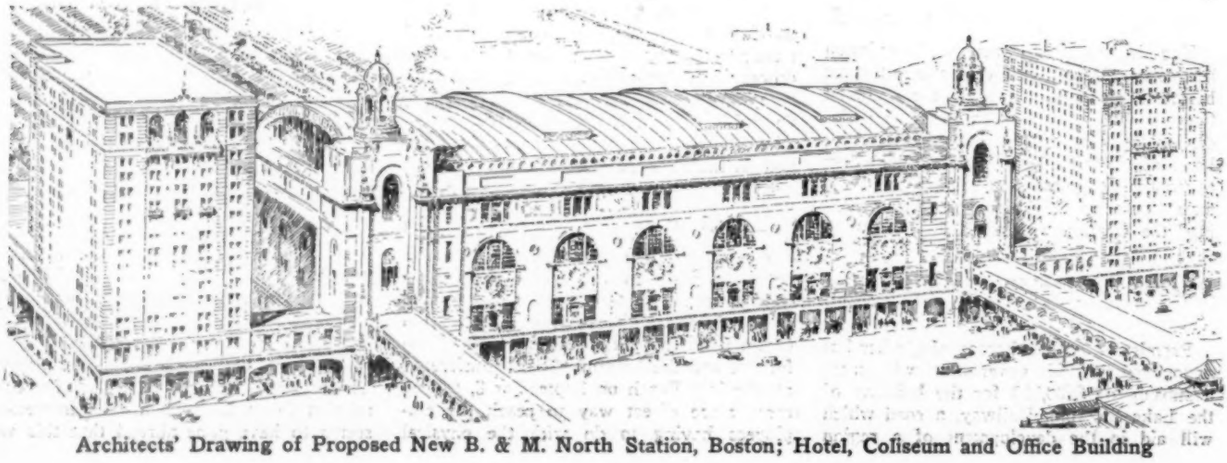
Gross earnings for ten months of the current year totalled $219,708,431. In the corresponding ten months of 1926 they were $216,711,581, an increase in 1927 of $2,996,849, equal to 1.38 per cent.

In the same period this year the operating expenses amounted to $186,366,833, and in ten months of 1926 they were $179,568,061, an increase in this period of 1927 of $6,798,771.29 or 3.79 per cent.

For this ten month period of 1927 the net earnings are $33,341,597. In the similar ten months of 1926 they were $37,143,519, a reduction of $3,801,921 in 1927.

The net of the Canadian Pacific amounted to $6,971,365, as compared with $7,947,199 in the corresponding month of last year, being a decrease of $975,834. Gross earnings are shown at $21,201,713, as against $21,377,710 in October of last year, a decrease of $175,996. Operating expenses for the month under review amounted to $14,230,348, which were $799,838 higher than in the same month of last year, when they totalled $13,430,510. This was the sixth consecutive decline in monthly net earnings, and the seventh of the year to date.

A decrease of $5,112,610 is shown in the net for the ten months of the year ended with October 31, which are shown



Architects' Drawing of Proposed New B. & M. North Station, Boston; Hotel, Coliseum and Office Building

at $31,466,611, as compared with $36,579,221 in the corresponding period of last year. For the ten-month period, gross earnings show an increase of $1,675,254, while operating expenses are higher by $6,787,865.

Testimonial to Daniel Willard

On November 21 at Baltimore a testimonial dinner was tendered to Daniel Willard, president of the Baltimore & Ohio, by 65 leading citizens of that city, 300 persons being present. As a token of appreciation of his achievement he was presented with a bronze plaque, illustrated

Bronze Plaque Showing Daniel Willard as an Engineman

herewith, showing him as a locomotive engineman.

Among the speakers who reviewed Mr. Willard's railroad career and his achievements as president of the Baltimore & Ohio, culminating in the centennial celebration this fall, were Mayor W. F. Broening of Baltimore and Governor Albert C. Ritchie of Maryland.

The Wood River Branch

It appears that one prominent railroad which was wholly put out of business by the floods in New England last month, has escaped newspaper notoriety; it is the Wood River Branch which extends from Hope Valley, in the southwestern part of Rhode Island, southward six miles to a junction with the New York, New Haven & Hartford, about half way between Providence and New London. This road is mentioned here as "prominent" because its name has stood out in bold letters in the Official Guide and in Poor's Manual for many years. But the cost of repairs to its track would amount to $5,000 or more, and President Ralph C. Watrous says that the company cannot raise the money. Since 1910, the business has been falling off because of the increased use of automobiles, and both passenger and freight traffic are now exceedingly light. The company is, however, continuing to run an automobile for the benefit of passengers and has asked the Interstate Commerce Commission for authority to abandon railroad operation entirely. The manufacturers and others who still depend upon the road for the transportation of their carload freight, such as coal, apparently have not found any way to contribute the sums necessary to support continued operation. The New York, New Haven & Hartford owns a part of the stock of the road and, in co-operation with President Watrous, controls it.

The rails of the track are 56 lb. section. The road was opened July 1, 1874. Henry A. Clark, track-foreman (of the whole line) has held that position for 50 years. There has been one serious derailment, a coach falling down a bank; but the only claim for damages was from a passenger who jumped off before the car fell and who was paid four dollars for his damaged derby hat.

This sum is the total of all damage payments to passengers during the road's whole career.

The account, in the Providence Journal, from which we take these notes, speaks of the Wood River Branch as the smallest independent steam railroad in the country; a statement which ignores the Moshassuck Valley, another Rhode Island railroad which has long held an honored place in the Official Guide. The Moshassuck Valley, however, is now operated for freight service only. It is two miles long, connecting Saylesville with the New Haven at Woodlawn, three miles north of Providence.

Railroad Division A.S.M.E. Announces Final Program for Annual Meeting

The Railroad Division, A.S.M.E., has announced the final program for its all-day session which will be held Tuesday, December 6, during the annual meeting of the society. Elliot Sumner, superintendent of motive power, Pennsylvania, New York, will be the presiding officer during the morning session and William Elmer, special engineer, Pennsylvania, Philadelphia, Pa., will be the presiding officer during the afternoon session. In addition to the Railroad Division program the Oil and Gas Power Division will present a paper on Diesel locomotives at its session on Thursday afternoon, December 8, at 2 p. m.

The Railroad Division sessions will be held in Room 2 on the fifth floor of the Engineering Societies building, 29 West Thirty-ninth street, New York. The following is a complete program for this session:

MORNING

9:30 a. m.—Progress in Railroad Mechanical Engineering. A report of the Railroad Division; presented by H. B. Oatley, chairman, Railroad Division.

9:40 a. m.—Can Accident Prevention Be Reduced to a Science? (To be read by title) by Thomas H. Carrow, superintendent of safety, Pennsylvania, Philadelphia, Pa.

9:50 a. m.—Back Pressure and Cut-Off Adjustment for the Locomotive. By Thomas C. McBride, consulting engineer, Locomotive feedwater heater department, Worthington Pump & Machinery Corporation, Philadelphia, Pa.

11:15 a.m.—The Motor Truck and L. C. L. Freight. By F. J. Scarr, the Scarr Transportation Service, New York.

AFTERNOON

2:00 p. m.—Heating and Ventilating of Passenger Cars. By Edward A. Russell, engineer of design, Vapor Car Heating Company, Chicago.

2:45 p. m.—Vibration of Bridges. By S. Timoshenko, professor, College of Engineering, University of Michigan, Ann Arbor, Mich.

3:30 p. m.—Discussion of progress report of the Railroad Division.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—T. L. Burton, 165 Broadway, New York City. Annual convention, May 1-4, 1928, Detroit, Mich. Exhibit by Air Brake Appliance Association.

AIR BRAKE APPLIANCE ASSOCIATION.—Charles R. Busch, Buffalo Brake Beam Co., 32 Nassau St., New York. Meets with Air Brake Association.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—J. D. Gowin, 112 W. Adams St., Chicago.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 S. Michigan Ave., Chicago. Next meeting, April, 1928, Biloxi, Miss.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothschild, Room 400, Union Station, St. Louis, Mo. Annual convention, June 12-15, 1928, Memphis, Tenn.

AMERICAN ASSOCIATION OF DINING CAR SUPERINTENDENTS.—L. M. Jones, supt. of sleeping and dining cars, C. M. & St. P., Chicago. Annual meeting, 1928, Havana, Cuba.

AMERICAN ELECTRIC RAILWAY ASSOCIATION.—J. W. Welsh, 292 Madison Ave., New York.

AMERICAN RAILROAD MASTER TINNERS' COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—C. Borcherdt, 202 North Hamlin Ave., Chicago.

AMERICAN RAILWAY ASSOCIATION.—H. J. Forster 30 Vesey St., New York, N. Y.

Division 1.—Operating—J. C. Caviston, 30 Vesey St., New York.

Freight Station Section (including former activities of American Association of Freight Agents)—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., N. Y.

Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association) —J. C. Caviston, 30 Vesey St., New York.

Safety Section.—J. C. Caviston, 30 Vesey St., New York. Annual meeting, May 16 and 17, 1928, Buffalo, N. Y.

Telegraph and Telephone Section (including former activities of the Association of Railroad Telegraph Superintendents)—W. A. Fairbanks, 30 Vesey St., New York. Next meeting, Sept. 18-20, 1928, San Francisco.

Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting Officers).—G. W. Covert, 431 South Dearborn St., Chicago.

Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York.

Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Annual meeting, March 6-8, 1928, Chicago. Exhibit by National Railway Appliances Association.

Construction and Maintenance Section.—E. H. Fritch.

Electrical Section.—E. H. Fritch.

Signal Section (including former activities of the Railway Signal Association).—H. S. Balliet, 30 Vesey St., New York. Annual meeting, March 5 and 6, 1928, Stevens Hotel, Chicago.

Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Annual convention, June 13-20, 1928, Atlantic City, N. J. Exhibit by Railway Supply Manufacturers' Association.

Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago.

Division VI.—Purchases and Stores (including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y. Annual meeting, June 13-15, Atlantic City, N. J.

Division VII.—Freight Claims, (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South

Dearborn St., Chicago, Ill. Annual meeting, June 5-8, 1928, Detroit, Mich.
Car Service Division.—C. A. Buch, 17th and H. Sts., N. W., Washington, D. C.

AMERICAN RAILROAD BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W., Ry., 319 N. Waller Ave., Chicago. Annual convention, 1928, Boston. Exhibit by Bridge and Building Supply Men's Association.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—M. C. Burton, General Industrial Agent, A. T. & S. F., Topeka, Kan. Annual convention, May, 1928, Miami, Fla.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—(Works in co-operation with the American Railway Association, Division IV). E. H. Fritch, 431 South Dearborn St., Chicago. Annual meeting, March 6-8, 1928, Chicago. Exhibit by National Railway Appliances Association.

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M. & St. P. Ry., 11402 Calumet Ave., Chicago. Annual convention, August 29-31, 1928, Hotel Sherman, Chicago. Exhibit by Supply Association of the American Railway Tool Foremen's Association.—Secretary: E. H. Lunde, Federal Machinery Sales Co., Chicago.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, 1319-21 F St., N. W., Washington, D. C. Next meeting, December 8-9, 1927, New Willard Hotel, Washington, D. C.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, Marion B. Richardson, Associate Mechanical Editor, *Railway Age*, 30 Church St., New York. Annual meeting, December 5-8, 29 W. 39th St.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—E. J. Stocking, 111 West Washington St., Chicago. Next annual convention, Jan. 24-26, 1928, Montreal, Que.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn. Next meeting, June, 1928, Omaha, Neb.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., Room 413, C. & N. W. Station, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.

ASSOCIATION OF RAILWAY EXECUTIVES.—Stanley J. Strong, 17th and H. Sts.; N. W., Washington, D. C.

ASSOCIATION OF RAILWAY SUPPLY MEN.—C. F. Weil, American Brake Shoe & Fdy. Co., 332 So. Michigan Ave., Chicago. Meets with International Railway General Foremen's Association.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—W. D. Waugh, Detroit Graphite Co., St. Louis, Mo. Annual exhibit at convention of American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 129 Charron St., Montreal, Que.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 626 North Fine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.

CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, 514 East Eighth St., Los Angeles, Calif. Regular meetings, second Friday of each month, 514 East Eighth St., Los Angeles.

CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.—R. E. Giver, 731 North 23rd St., East St. Louis, Ill. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.

CENTRAL RAILWAY CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 2nd Thursday each month, except June, July, August, Hotel Statler, Buffalo, N. Y.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—(See Railway Car Department Officers' Association.)

CINCINNATI RAILWAY CLUB.—D. R. Boyd, 811 Union Central Bldg., Cincinnati, Ohio. Meetings, 2nd Tuesday in February, May, September and November.

CLEVELAND RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings, first Monday each month, except July, August, September, Hotel Hollenden, Cleveland.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Annual convention, August 21-23, 1928, Hotel Sherman, Chicago. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.—W. W. Criley, Alan Mfg. Co., Cleveland, O.

INTERNATIONAL RAILROAD FUEL ASSOCIATION.—L. G. Plant, 80 E. Jackson Blvd., Chicago. Annual convention, May 7-11, 1928, Chicago. Exhibit by International Railway Supply Men's Association.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabash Ave., Winona, Minn. Annual convention, September 4-7, 1928, Chicago.

INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.—W. J. Dickinson, 189 W. Madison St., Chicago. Meets with International Railway Fuel Association.

MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 26 Cortlandt St., New York. Annual meeting, May 22-25, 1928, Cleveland, O.

NATIONAL ASSOCIATION OF RAILROAD TIE PRODUCERS.—E. A. Morse, vice-president, Potosi Tie & Lumber Co., St. Louis, Mo. Next annual convention, April 24-26, 1928, Arlington Hotel, Hot Springs, Ark.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—James B. Walker, 270 Madison Ave., New York. Annual convention, September, 1928, Glacier National Park, Mont.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, 1014 South Michigan Ave., Chicago. Exhibit at A. R. E. A. convention, March 5-8, 1928, Coliseum, Chicago.

NATIONAL SAFETY COUNCIL.—Steam Railroad Section: C. F. Larson, supt. of safety, Missouri Pacific, St. Louis, Mo.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings 2nd Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

NEW YORK RAILROAD CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Annual dinner, December 15, Hotel Commodore, New York. Regular meetings 3rd Friday in month, except June, July and August.

PACIFIC RAILWAY CLUB.—W. S. Wollner, 64 Pine St., San Francisco, Cal. Regular meetings, 2nd Thursday, in month, alternately in San Francisco and Oakland.

RAILROAD MOTOR TRANSPORT CONFERENCE.—R. H. Newcomb, 492 South Station, Boston, Mass.

RAILWAY ACCOUNTING OFFICERS ASSOCIATION.—E. R. Woodson, 116 Woodward Building, Washington, D. C. Next convention, May 1-4, 1928, Atlanta, Ga.

RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 1406 Packard Bldg., Philadelphia, Pa.

RAILWAY CAR DEPARTMENT OFFICERS' ASSOCIATION.—A. S. Sternberg, Belt Ry. of Chicago, Polk and Dearborn Sts., Chicago. Supply Men's Association.—B. S. Johnson, W. H. Miner, Inc., 209 S. La Salle St., Chicago.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton, St., Chicago. Meets with Association of Railway Electrical Engineers.

RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.—F. W. Venton, Crane Co., 836 S. Michigan Ave., Chicago. Meets with Traveling Engineers' Association.

RAILWAY FIRE PROTECTION ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

RAILWAY REAL ESTATE ASSOCIATION.—C. C. Marlor, 208 W. Washington St., Chicago.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION. J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division and Purchases and Stores Division, A. R. A.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A., Division I.

RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, 1217 Commercial Trust Bldg., Philadelphia, Pa.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual convention, September, 1928, Detroit, Mich. Exhibit by Track Supply Association.

ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2nd Friday in month, except June, July and August.

SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, West Nyack (Rockland Co.), N. Y. Meets with A. R. A., Signal Section.

SOUTHEASTERN CARMEN'S INTERCHANGE ASSOCIATION.—Clyde Kimball, Inman Shops, Atlanta, Ga. Meets semi-annually.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3rd Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—R. G. Parks, A. B. & A. Ry., Atlanta, Ga.

TRACK SUPPLY ASSOCIATION.—A. H. Todd, Positive Rail Anchor Co., 80 E. Jackson Bl'v'd., Chicago. Meets with Roadmasters' and Maintainance of Way Association.

TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, Gen. Supt. R. S., New York Central, Buffalo, N. Y. Annual convention, October, 1928, Chicago. Exhibit by Railway Equipment Manufacturers' Association.

WESTERN RAILWAY CLUB.—W. J. Dickinson, 189 West Madison St., Chicago. Regular meetings, 3rd Monday each month, except June, July and August.

Traffic

The Interstate Commerce Commission has announced an investigation into the reasonableness and lawfulness of the interstate freight rates on cement for hauls of 80 miles and less, in a large area in the central part of the United States.

The Interstate Commerce Commission has suspended from November 28 until June 28, 1928, the operation of tariff schedules filed by the railroads proposing to increase the freight rates on canned goods from and to points in California, Oregon, Washington, Idaho and Montana.

Slack barrels, their design and economical management, and methods of packing for glass tableware, constitute the topic of circular No. 21 which has been issued by the Freight Container Bureau, Edward Dahill, chief engineer, 30 Vesey street, New York City. This is a 12-page pamphlet, illustrated with a dozen halftone photographs, setting forth every possible detail of the subjects indicated by the title.

A further postponement of the effective date of the order of July 20 reducing the rates on California deciduous fruits under the Hoch-Smith resolution was announced by the Interstate Commerce Commission on November 26, although it had issued a decision reaffirming its original decision. The new effective date is January 10. The order had been postponed, on petition of the railroads from October 10 to December 10.

The Great Northern has contracted with the Southern Pacific for joint use of the tracks of the latter railway between Chemult, Ore., near Paunina, and Klamath Falls, 75 miles. When the line now under construction between Bend, Ore., and Chemult is completed train service will be established between the main line of the Spokane, Portland & Seattle at Wishram, Wash., and Klamath Falls, via the Oregon Trunk, 298 miles.

The Interstate Commerce Commisison on November 28 announced a postponement from February 3 to April 3 of the effective date of its orders in the consolidated southwestern cases, in which it prescribed a comprehensive revision of freight rates in the Southwest based on mileage scales. The southwestern railroads had asked for a postponement for at least sixty days, saying that unless they were allowed further time they could not get the tariffs prepared in time to give 45 days' notice as required by the order.

The Chicago & North Western and the Union Pacific have placed a "limousine" observation lounge car in service on "The Columbine" between Chicago and Denver, Colo., in which is introduced a spacious glass enclosed observation parlor for winter and summer use. The car also contains a women's lounge, a men's club room, a buffet soda fountain and a correspondence desk; and is provided with valet service. The car has a drawing room

and a compartment which can be used singly or ensuite with servidor service in both rooms.

By the consolidation of passenger train service on the Northern Pacific, the Minneapolis, St. Paul & Sault Ste. Marie, and the Great Northern between the Twin Cities and Duluth, Minn., effective November 27, there are six daily trains northbound and seven southbound. Of the six northbound, the Northern Pacific operates three, one in the morning and two in the afternoon; the Soo Line one in the afternoon and the Great Northern two, one in the morning and one in the afternoon. Southbound, the Northern Pacific operates one in the morning and one in the afternoon, while the other two roads each operate one train in the morning and one in the afternoon. Tickets are interchangeable on all trains.

The "Miamian," through express train between New York and Miami, Fla., over the Pennsylvania; the Richmond, Fredericksburg & Potomac; the Atlantic Coast Line and the Florida East Coast, is now scheduled to leave New York at 9:30 a.m. and to reach Miami at 7:15 the next evening; 33 hours, 45 minutes. The schedule shows 13 stops between New York and Miami. At Washington and also at Jacksonville, the train stops 30 minutes. Deducting these, and also an estimated 90 minutes for other stops, it is calculated that the actual average running time is 43.7 miles an hour. From Jacksonville to Miami, 345 miles, the time is eight hours, 45 minutes; and, beginning December 19, this portion of the run will be further shortened by 45 minutes.

N-C-O Standard Gage to Alturas

Officers of the Southern Pacific and the Nevada-California-Oregon celebrated the establishment of standard gage train service into Alturas, Cal., on November 11. The reconstruction of the latter railroad and its change from 3-ft. gage to 4 ft. 8½ in., will be continued to include the whole length of the road, from Wendel, Cal., to Lakeview, Oregon, 155 miles.

New Boat for Cape Charles Line

The Pennsylvania has ordered for its passenger and freight line between Cape Charles, Va., and Norfolk, 32 miles, a new steel steamer 300 ft. long with 50 ft. beam, to have three decks. The two upper decks will be devoted to passengers and the lower deck to freight and automobiles. A steel fireproof deck will be provided with space for 46 automobiles. This boat, added to the two now in service, will increase the passenger capacity of the ferry from 2,000 to 3,200.

Freight Traffic in September

The freight moved by the Class I railroads in September amounted to 42,954,142,000 net ton-miles, according to reports compiled by the Bureau of Railway Economics. This was a decrease of 1,391,603,000 net ton-miles, or 3.1 per cent, under that of the record of September, 1926.

In the Eastern district there was a decrease of 6.7 per cent, in the Southern district 2.2 per cent, and in Western an increase of 1.4 per cent.

For nine months the total was 357,294,784,000 net ton-miles, an increase of 365,058,000 net ton-miles, or one-tenth of one per cent above that of the corresponding period last year and an increase of 7.2 per cent above the corresponding total for 1925. The average daily movement per freight car for the first nine months of 1927 was 30.2 miles, the highest mark ever attained in any corresponding period and an increase of 0.3 mile above the best previous average (1926).

The average load per car for nine months was 27.3 tons, an increase of 0.2 ton above 1926.

New Haven Football Traffic

The total number of passengers transported to and from New Haven, Conn., over the New York, New Haven & Hartford on Saturday, November 12, the occasion of the Yale-Princeton football game, was 49,988; carried in 102 trains, special and regular. The number of special trains from New York was 30 and the same number was run on the return in the afternoon. The total number of trains run to New Haven in the morning from east, north and west was 49; 16 regular and 33 special; total out of New Haven in the afternoon, 20 regular and 33 special. A special condensed train-sheet made up for the general manager's office contains one item "minutes lost"; but the line is filled up mostly with dashes, indicating that the trains were on time or ahead of time. There were two delays of 25 minutes each and one of 44 minutes, all westbound; but these trains were not football specials.

The specials from New York (72 miles) were scheduled to run through in two hours, 15 minutes, but some of them made up as much as 15 minutes. Between 5:30 P. M. and 6:30, 15 trains left New Haven for New York. Besides the regular movement and the football extras the line from New Haven to Mott Haven Junction, 67 miles, was used on that day (during the rush hours) by seven heavy passenger trains of the Boston & Albany, detoured over this route because of the flood damage in Massachusetts; three westward and four eastward.

Supreme Court Decides Questions of Jurisdiction on Transportation from Canada

The Supreme Court of the United States, in a decision rendered on November 21, held that where a railroad of the United States and a Canadian railroad unite in the publication of a joint through rate from a point in Canada to a point in the United States, the Interstate Commerce Commission has jurisdiction, on complaint made against the United States railroad alone, to determine the reasonableness of such joint through rate for the purpose of ascertaining the amount of damages to shipper or consignee. The court also held that in the absence of a finding that the charges for transportation in the United States alone were unjust and unreasonable the commission has jurisdiction to make an order for the payment of damages in the amount that the entire transportation charges (on the basis of the joint through rate) exceeded those which would have been assessed on the basis of the joint through rate found by the commission to have been unreasonable.

The case was one in which the commission had held a rate on newsprint paper from Thorold, Ont., to New York city to be unreasonable and had awarded reparation from the carriers engaged in the transportation within the United States, without determining what would be a reasonable rate from the Canadian boundary to New York, and that a suit for damages could be maintained against the United States carrier alone. The plaintiff sued for reparation and the district court sustained a demurrer by the defendant railroads, after which the circuit court of appeals certified to the Supreme Court certain questions as to which it desired instruction.

The Supreme Court in its decision said the railroads in the United States were liable for damages sustained in consequence of their failure to establish just and reasonable rates for the transportation within the United States.

New M. P. Train to Texas

The Missouri Pacific, in conjunction with the Texas & Pacific and the International Great Northern, has established a new train between St. Louis, Mo., and points in Texas and another between St. Louis and Memphis, Tenn., besides rearranging several schedules. "The Texan" leaves St. Louis at 2:10 p. m. and at Bald Knob, Ark., receives a connection from Memphis. This train arrives at Little Rock at 10:55 p. m., Dallas at 8:35 a. m., and San Antonio at 5:55 p. m. Returning, the train leaves Houston at 10:00 p. m. and El Paso at 8:30 p. m., Dallas at 2:00 p. m., and arrives at St. Louis at 8:20 a. m., Eastbound, the name of the "Sunshine Special" is changed to "The Texan" between El Paso and Fort Worth.

The "Texas Ranger" now leaves St. Louis at 10:30 p. m. instead of 9:15 p. m. and arrives at Dallas at 7:45 p. m. instead of 8:15 p. m. It leaves Dallas at 8:20 p. m. and carries a Dallas-Abilene sleeper and two Pecos sleepers serving the west Texas oil territory. This train arrives at Sweetwater at 3:15 a. m., and El Paso at 4:15 p. m., where it connects with the Southern Pacific Sunset Limited which leaves El Paso at 7:05 p. m. Returning, the Texas Ranger leaves El Paso at 10:45 a. m. instead of 9:00 a. m. and arrives at Fort Worth at 6:30 a. m., and St. Louis at 7:15 a. m.

Another new train furnishing overnight service from the west Texas oil territory to Fort Worth and Dallas, carrying through sleepers from Pecos, Lubbock, San Angelo and Abilene to Fort Worth and Dallas, leaves Pecos at 6:30 p. m., and arrives at Dallas at 8:10 a. m. Returning, it leaves Dallas at 9:00 p. m., Fort Worth at 10:30 p. m. and operates on approximately the same schedule as the present Train No. 5 to Pecos. A third new train, "the Tennessean," leaves St. Louis at 11:30 p. m. and arrives at Memphis at 7:30 a. m. Returning, it leaves Memphis at 11:20 p. m. and arrives at St. Louis at 7:20 a. m.

Foreign

New Chairman for L. M. S.

Sir Josiah Stamp, president of the executive of the London, Midland & Scottish has been elected also chairman of the company, succeeding Sir Guy Granet who has resigned as chairman but remains as a director. Frederick George Evans, formerly chief stores superintendent, has been elected secretary succeeding R. C. Irwin, retired. W. A. Ree, goods operating manager, has succeeded Mr. Evans as chief stores superintendent.

Electrified Lines Through the Pyrenees

The Pyrenees will soon be climbed and pierced by an electric railway now under construction. A connecting line is being constructed between the Midi Railway of southern France and the Spanish railway system that joins Barcelona with Madrid and other important cities. Only where the Pyrenees fall off at the seaboard can railways pass without difficult problems of engineering. More direct routes between the important cities of France and Spain have been sought and many years of study have been given to the subject.

Throughout the southern part of France runs the electrified Midi Railways, sending branch lines to the northern edge of the Pyrenees mountains. Likewise on the Spanish side are railroads with branches that approach the range but go no farther towards France.

One of the plans which has been brought to the stage of construction is to connect Toulouse with Barcelona in a route that will be fairly direct. Farther to the west a line is being built from Pau on the Midi to Jaca that lies to the south, just over the mountains, the terminus of a branch line of a Spanish line.

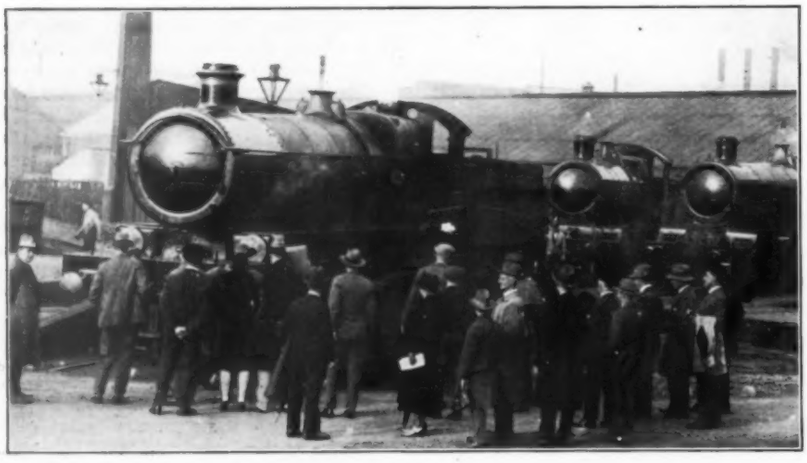
The French part of the Pau-Jaca line will be electrified because of the numerous tunnels, the curves of approximately 650-ft. radius and the almost continuous grade of 4.3 per cent. The electrification will be divided into two sections, one from Pau to Bedous, and the other from Bedous to Canfranc. The first section is already completed, but at present is operated as a steam road. There are three substations equipped with 750-kilowatt, 1,575-volt, direct-current sets, each set comprising two rotary converters in series.

The second section, from Bedous to Canfranc, has two substations in each of which are to be two 2,000-kilowatt sets, each consisting of two rotary converters in series, built by the Compagnie Francaise Thomson-Houston, French agents of the International General Electric Company. These machines are compound excited with a special winding to allow regeneration by the locomotives.

Public Inspection of Railroad Shops in England

The Great Western (England) on November 3 operated excursions from London to Swindon to give the general public an opportunity to see its main shops at that point. Sales of tickets were stopped when a total of 700 had been reached, since the railroad did not wish to have too large a crowd of visitors on a work day. Special rates of 5 shillings ($1.20) for the round trip were offered and so popular was the occasion that the maximum of 700 was reached two days before the excursion day. The party was divided into groups of 14, each group having a guide assigned to it. Excellent running time was made with the excursion trains, one of them making the return trip to London (77¼ mi.) in 68½ min.

THE ILLINOIS CENTRAL and the Mobile & Ohio will establish through sleeping car service between Chicago and Mobile, Ala., on a 23½-hour schedule southbound and a 22½-hour schedule northbound. Southbound, cars will leave Chicago at 6:15 P. M. and northbound, they will leave Mobile at 11:00 P. M.



Wide World

London Excursionists Visiting Great Western Shops at Swindon

Equipment and Supplies

Locomotives

THE MIDLAND VALLEY is inquiring for 4 locomotive tenders.

THE GREAT NORTHERN is building four locomotives in its shops at Hillyard, Wash.

THE READING has ordered a 60-ton oil electric locomotive from the Ingersoll-Rand Company, the General Electric Company, and the American Locomotive Company, which companies co-operate in its manufacture.

THE CHESAPEAKE & OHIO has given a contract for the repair of 12 class H-4 Mallet type locomotives, to the Newport News Shipbuilding & Dry Dock Company. The work is to be done at an approximate cost of $300,000 in the Shipbuilding Company's shops at Newport News.

Freight Cars

THE WOODWARD IRON COMPANY is inquiring for 10 steel ore cars of 60 tons' capacity.

THE CHICAGO & EASTERN ILLINOIS is inquiring for 500 automobile box cars of 40 tons' capacity.

THE H. C. FRICK COKE COMPANY is inquiring for prices on the repair of 640 coke cars, of 70 tons' capacity.

THE UNITED STATES NAVY, BUREAU OF AERONAUTICS, is inquiring for 1, 3 or 5 tank cars to carry Helium gas.

THE FRUIT GROWERS EXPRESS has ordered 240 steel underframes from the Pressed Steel Car Company, and 60 from the Pennsylvania Car Company.

THE CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA has ordered 250 gondola cars from the Standard Steel Car Company. Inquiry for this equipment was reported in the *Railway Age* of November 12.

THE ARGENTINE STATE RAILWAYS, reported in the *Railway Age* of November 26 as inquiring through the car builders for 200 freight cars, is now inquiring for about 700 cars to include box, flat and tank cars.

THE CHICAGO & NORTH WESTERN has ordered 250 hopper car bodies from the Standard Steel Car Company and 250 from the Illinois Car & Manufacturing Company, and 25 caboose cars from the American Car & Foundry Company.

Passenger Cars

THE HAVANA CENTRAL is inquiring for 9 interurban motor cars, 39 feet long.

THE CHICAGO, BURLINGTON & QUINCY has ordered 25 gas-electric rail motor cars

from the Pullman Car & Manufacturing Corporation. Inquiry for this equipment was reported in the *Railway Age* of October 1.

THE BALTIMORE & OHIO has ordered 11 passenger gas-electric rail motor cars and 1 passenger, baggage and mail gas-electric rail motor car, all 60 ft. long and 1, 50-ft. 10-in. passenger trailer car, from the J. G. Brill Company.

THE CHICAGO & NORTH WESTERN has ordered 5 gas-electric rail motor cars from the Pullman Car & Manufacturing Corporation. A previous order for 5 cars was given to the same builder in October. Part of this equipment is for service on the Chicago, St. Paul, Minneapolis & Omaha.

Iron and Steel

THE NATIONAL RAILWAYS OF MEXICO are inquiring for 900 tons of steel for bridges in Mexico.

THE ERIE has ordered 150 tons of steel for a bridge in Indiana, from the American Bridge Company.

THE BOSTON & ALBANY is inquiring for 200 tons of fabricated steel for a machine shop, at West Springfield, Mass.

THE DELAWARE, LACKAWANNA & WESTERN is inquiring for 150 tons of steel for signal bridges near Paterson, N. J.

THE TEXAS & PACIFIC has ordered 14,000 tons of rail from the Tennessee Coal, Iron & Railroad Co.

THE CENTRAL OF GEORGIA has ordered 5,000 tons of rail from the Tennessee Coal, Iron & Railroad Co.

THE CHICAGO, INDIANAPOLIS & LOUISVILLE has ordered 5,000 tons of rail from the Illinois Steel Company.

THE NEW YORK CENTRAL has received bids on steel for eleven bridges at South Bend, Ind., and Port Clinton, Ohio, aggregating 4,950 tons.

THE NEW YORK, CHICAGO & ST. LOUIS has ordered 500 tons of structural steel for a bridge in Cleveland, Ohio, from the Fort Pitt Bridge Works.

THE READING COMPANY has received bids on 400 tons of steel for a bridge over the Raritan river and Raritan canal, at Bound Brook, N. J.

THE CHICAGO & NORTH WESTERN has ordered 24,000 tons of rail from the Illinois Steel Company and 9,200 tons from the Inland Steel Company.

THE BOSTON & MAINE is inquiring for 150 tons of steel for a bridge at Lebanon, N. H., and has ordered 350 tons of steel for bridge replacement work, from the Phoenix Bridge Company.

Signaling

THE WABASH has ordered from the Union Switch & Signal Company, an electric interlocking machine, type F, for Decatur, Ill.

Supply Trade

L. M. Ritchie has been appointed district manager, railway sales of the **E. I. du Pont de Nemours Company, Inc.,** with headquarters at Chicago.

The B. & S. Manufacturing Corporation, Hoboken, N. J., has appointed the **T-Z Railway Equipment Company,** 14 E. Jackson Boulevard, Chicago, its western sales representative.

Joseph A. Donahey, sales and service engineer of the **Cleveland Frog & Crossing Co.,** Cleveland, Ohio, has been appointed manager of sales, succeeding George Stanton, deceased.

The directors of both the **Republic Iron & Steel Co.,** and the **Trumbull Steel Company** have approved a plan for the consolidation of these companies. The plan will be submitted to the stockholders of both companies for ratification.

The Bradford Corporation, New York, will in future handle the business of the Walker Draft Gear Company, and **Edmund H. Walker,** heretofore president of the latter company, has been appointed a vice-president of the Bradford Corporation, with headquarters at New York.

L. E. Lynde has been appointed manager of the transportation division of the Boston, Mass., office of the **Westinghouse Electric & Manufacturing Company,** succeeding H. S. Day, resigned. Mr. Lynde has been with the Westinghouse Company since 1920, and during the past several years has been located in its New York office engaged in transportation activities.

The O. M. Edwards Company, Syracuse, N. Y., manufacturer of railroad supplies and a diversified line of steel furniture, with a plant consisting of a five-story building 210 ft. by 55 ft., in order to take care of its increasing business has completed work on an addition to the original building. The new structure is a four-story building 160 ft. by 60 ft., with a basement and an extension in the saw-teeth form of construction 120 ft. by 120 ft., extending in the rear of the plant. The H. K. Ferguson Company, Cleveland, Ohio, was the engineer and construction expert for the new building; it provides for straight line production and a great reduction of material travel. Every department and machine in the plant has been moved and relocated to increase its efficiency. Production continued without interruption during the entire building operation.

The American Rolling Mill Company has taken over and is directing the sales of the forged steel wheels manufactured by the Forged Steel Wheel Company, whose properties were recently acquired by the American Rolling Mill Company from the Standard Steel Car Company. While the sales of wheels are being conducted by the American Rolling Mill Company through its forged steel wheel division, the Standard Steel Car Company is retaining a substantial interest in the business. **Harry Holiday,** formerly vice-president of the Forged Steel Wheel Company, is general manager of sales with headquarters in Pittsburgh, Pa., **W. B. Quail,** formerly with the Standard Steel Car Company, is manager of sales for the eastern district, with headquarters at New York; **William A. Libkeman,** formerly of the Standard Steel Car Company, is sales representative and is directing the sales at Chicago; **Blake C. Howard,** president of the Equipment Sales Corporation, is directing the sales at the St. Louis office.

W. H. Woodin, American Locomotive Company President

William H. Woodin, chairman of the board of the American Locomotive Company, has been elected also president, to succeed Frederick F. Fitzpatrick, deceased. Mr. Woodin was first elected president of the American Locomotive Company in December, 1925, succeeding Andrew Fletcher, deceased. When the Railway Steel-Spring Company was amalgamated with the American Locomotive Company in 1926, Mr. Woodin was made chairman of the board of the American Locomotive Company, and Frederick F. Fitzpatrick, who had served as president of the Railway Steel-Spring Company since 1910, was made president. Mr. Woodin now combines the offices of chairman of the board and president. He is also president of the American Car & Foundry Company.

Pressed Steel Car Company

Stockholders of the Pressed Steel Car Company, at a special meeting to be held at Jersey City, on December 12, will vote on proposed changes in its capitalization, consisting of a three-for-one split-up of the common stock, the redemption of 25 per cent of the outstanding preferred stock and of $6,000,000 gold bonds, and the issuance of $9,750,000 of new debentures to provide for these retirements.

The detailed plan provides for an increase in the authorized common stock from 463,000 shares of $100 par value to 1,389,000 shares of no par value, to enable the split-up to be made, and the authorization of an issue of $9,750,000 of fifteen-year 5 per cent convertible gold debenture bonds, due in 1943, redeemable at any time at 105, and convertible at the rate of 25 shares of new common stock for each $1,000 debenture.

Of the debenture bond issue, $6,000,000 will be offered to the common stockholders, the receipts to be used for the retirement of the outstanding $6,000,000 convertible gold 5 per cent bonds due in 1933. If the common stockholders do not absorb the

debentures, the unused balance is to be offered to the present bondholders in exchange, at the rate of $10,000 of debentures and 30 shares of no par common stock for each $10,000 of bonds. George J. Whelan, in consideration of services to be rendered, is to receive 1½ shares of new common stock for each $1,000 of existing bonds exchanged within sixty days of the offer.

The remaining $3,750,000 of debenture bonds is to be offered at par to the common stockholders after the outstanding gold bonds have been redeemed. Any amount not taken by them is to be offered to holders of the preferred stock in exchange for 25 per cent of their holdings, on the basis of $10,000 of debentures and 30 shares of new common stock for each 100 preferred shares exchanged.

There is $15,000,000 authorized and outstanding 7 per cent non-cumulative preferred stock of $100 par value, of which 25 per cent amounts to $3,750,000.

Obituary

Luther Rice, chief engineer of the Robert W. Hunt Company, died at Glendale, California, on November 19.

Harry V. Wille, consulting vice-president concerning engineering and metallurgy, of the Baldwin Locomotive Works, Philadelphia, Pa., died on November 29, at Philadelphia.

Charles B. Manville, founder of the present Johns-Manville Corporation, died at his home in Pleasantville, N. Y., on November 26 at the age of 92. Mr. Manville started the business in 1858 and retired from active participation in the business in 1902. The present name of the firm was adopted in January, 1927.

John R. Mitchell, sales engineer for W. H. Miner, Inc., who died on November 7 at Chicago, was born in 1873 at Lafayette, Ind. He attended Purdue University and in 1891 entered the employ of the Chicago and North Western as a special apprentice; thereafter he worked in the testing department about a year, and was later in charge of the dynamometer car. From 1899 to 1902 he was a roundhouse foreman on the Galena division, and general foreman at Ashland, Wis., and Green Bay. In 1902 he was appointed master mechanic on the Atchison, Topeka & Santa Fe at Cleburne, Tex., and later returned to the Chicago and North Western, where he served as testing engineer, being located at Pittsburgh, Pa. Mr. Mitchell became associated with W. H. Miner, Inc., as mechanical engineer in May 1902, and in 1906 was appointed sales engineer, which position he held until his death.

Trade Publications

CARNEGIE BEAM SECTIONS—Tables of dimensions and properties of a new series of Carnegie beam sections for use as beams and columns are given in a 20-page pamphlet issued by the Carnegie Steel Company, Pittsburgh, as a supplement to the "Shape" book. It is designated as A.I.A. File No. 13.

Construction

ATCHISON, TOPEKA & SANTA FE.—A contract for the construction of an automatic electric sand handling and drying plant, with a storage capacity of 540 tons of wet sand in a steel pocket, at Temple, Tex., has been let to the Ogle Construction Company, Chicago.

BOSTON & MAINE.—This company is considering plans for the building of a bridge on its line at Livermore Falls, N. H.

BOSTON & MAINE.—A contract for the installation of automatic electric coaling station equipment at Troy, N. Y., has been let to the Roberts & Schaefer Company, Chicago.

CHESAPEAKE & OHIO.—This road, together with the Richmond, Fredericksburg & Potomac, has let a contract to Doyle & Russell of Richmond, Va., for the construction of a joint passenger station at Doswell, Va. The structure will be of brick with a slate roof and of colonial architecture. The central portion will be 20 ft. by 40 ft. and there will be two wings each 19 ft. by 27 ft. 6 in. The cost of the project will be approximately $30,000.

CHICAGO & NORTH WESTERN.—This company has awarded contracts for the construction of a 1,000,000-bu. addition to the grain elevator at Council Bluffs, Iowa, to cost approximately $350,000. Excavation will be done by C. A. Wickham & Co., Council Bluffs; piles will be driven by Whitney Brothers & Co., Duluth, Minn., while the Barnett-Record Company, Minneapolis, Minn., will construct the addition proper which will consist of 35 reinforced concrete bins and 29 interspaces, each 110 ft. high and covering an area 160 ft. by 113 ft.

CHICAGO, INDIANAPOLIS & LOUISVILLE.—The Public Service Commission of Indiana has issued an order requiring the separation of highway and railroad grades at the crossing of the Crown Point-Cedar Lake highway at Armour, Ind.

CLEVELAND UNION TERMINALS.—A contract for the construction of a reinforced concrete viaduct and runway at Prospect avenue, Cleveland, Ohio, has been awarded to the Hecker-Moon Company, Cleveland, at a cost of about $200,000.

LONG ISLAND.—Plans are being considered by the borough officers of Manhattan (New York City) and Brooklyn and representatives of the Long Island for putting the tracks of the Atlantic avenue, Brooklyn, division of the Long Island underground to eliminate approximately 30 grade crossings in the city of Brooklyn and to make a boulevard of Atlantic avenue. The approximate cost as figured by the Board of Estimate of New York City is $26,000,000, of which the railroad's share would be a little over $9,000,000. Other grade crossing elimination projects on the Long Island include eliminations at Corona, Springfield, St. Albans and Rockaway Beach. The Transit Commission of New York desires crossings eliminated at these points in 1928. It is estimated that eliminating eight grade crossings at Springfield and St. Albans would cost about $1,900,000; four crossings at Corona, $1,000,000, and 26 crossings between Arverne and Rockaway Park, $7,000,000.

LOUISVILLE & NASHVILLE.—Bids closed on November 30 for the construction of a line between Chevrolet, Ky., and Hagans, 14 miles, as a link in the forming of a connection with the Clinchfield at Miller Yard, Va., through trackage rights over the Interstate from Norton, Va., to Miller Yard, 18 miles. This project, which will involve the construction of three tunnels, will cost approximately $5,287,000.

NEW HOLLAND, HIGGINSPORT & MT. VERNON.—The United States Engineers' Office, Norfolk, Va., has taken bids for the construction of a single-track steel swing bridge at a proposed crossing of this railroad over inland waterway from Norfolk to Beaufort Inlet, N. C.

NEW YORK CENTRAL.—This road has given a contract to Wright & Kremers, Inc., Niagara Falls, N. Y., for the construction of a freight house with platforms and canopies, at North Tonawanda, N. Y.

NEW YORK, CHICAGO & ST. LOUIS.—A contract for the construction of a one-story brick, steel and concrete freight station at Cleveland, Ohio, has been let to the S. W. Emerson Company, Cleveland, at a cost of about $150,000. Outside dimensions of the building will be 80 ft. by 460 ft.

OREGON - WASHINGTON RAILWAY & NAVIGATION CO.—This company, the Northern Pacific, the Chicago, Milwaukee & St. Paul and the Puget Sound Electric will share in the cost of an 800-ft. steel and concrete highway viaduct at Argo, Wash. A contract for its construction has been let to the J. A. McEachern Company, Seattle, Wash., at a cost of about $230,000.

READING.—This road contemplates the construction of a steel bridge over the Raritan canal and the Raritan river on its line at Bound Brook, N. J.

READING.—This railroad plans the elimination of a number of grade crossings in Shippensburg, Pa., in connection with improvements in its line from Shippensburg to Lurgan.

READING.—A contract has been awarded to the Ogle Construction Company, Chicago, for the construction of a 200-ton reinforced concrete coaling station at Cressona, Pa. Included in this contract is the construction of a sand handling plant and a two-track cinder pit.

RICHMOND, FREDERICKSBURG & POTOMAC.—See Chesapeake & Ohio.

Financial

ATCHISON, TOPEKA & SANTA FE.—*Acquisition of Line.*—The Interstate Commerce Commission has authorized this company to purchase from the St. Louis, Rocky Mountain & Pacific Company lines leased since 1906 aggregating 34,113 ft. in length, in Colfax County, N. Mex.

CHICAGO, MILWAUKEE & ST. PAUL.—*Supreme Court Declines to Review Reorganization Decision.*—The Supreme Court of the United States on November 28 denied a petition of the bondholders' defense committee for a review of the decisions of the lower courts confirming the reorganization plan and foreclosure sale.

CINCINNATI, NEW ORLEANS & TEXAS PACIFIC.—*Extra Dividend.*—Directors have declared an extra dividend of 3 per cent and the regular semi-annual dividend of 4 per cent on the common stock, both payable December 27 to stock of record December 9. A similar extra dividend of 3 per cent was paid on December 21, 1926.

CINCINNATI SOUTHERN.—*Terms of Lease.*—Under the terms of the lease of this company to the Cincinnati, New Orleans & Texas Pacific, approved by popular vote at Cincinnati, Ohio, on November 8, which will expire on December 31, 2026, and replacing a lease which expires in 1966, the City of Cincinnati will receive a rental as follows: From January 1, 1928, to December 31, 1946, fixed annual rental of $1,250,000 and 2 per cent per year of net profits; from January 1, 1947, to December 31, 1966, fixed annual rental of $1,350,000 and 3 per cent per year of net profits; from January 1, 1967, to December 31, 1986, fixed annual rental of $1,450,000 and 4 per cent per year of net profits; from January 1, 1987, to December 31, 2006, fixed annual rental of $1,600,000 and 5 per cent per year of net profits; from January 1, 2007, to December 31, 2026, fixed annual rental of $1,700,000 and 6 per cent per year of net profits. The rental is payable in quartely installments, the C.N.O.&T.P. assumes interest and sinking fund payments on city bonds issued for terminal improvements and betterments and agrees that "net profits" shall be the difference between net railway operating income and the fixed rental. During the period which will expire on December 31, 1927, the rental is $1,100,000 per year. Under the former lease the city had no direct share in the profits of the company though from July, 1902, to October, 1923, a deferred rental of $200,000 per year was paid to the city. The C.N.O.&T.P. as part of the new lease will immediately construct, with its own capital, a second main track between Williamstown, Ky., and Danville, 77 miles, at an estimated cost of $13,200,000.

KANSAS CITY, MEXICO & ORIENT.—*Reorganization.*—The Interstate Commerce Commission has reopened for further hearing the proceedings on this company's application for authority to take over the property of the old company and to issue new securities pursuant to the plan of reorganization. Action on the application had not been taken pending the court proceedings.

KANSAS CITY, MEXICO & ORIENT.—*Hearing on Reorganization Plan.*—The Interstate Commerce Commission has assigned for hearing on January 4 at Washington the application of the new company for authority to take over the property of the old company and to issue its securities in accordance with the reorganization plan as approved by the courts. The hearing will be before Assistant Director Burnside of the Bureau of Finance and Examiner Devoe.

KANSAS CITY SOUTHERN.—*Supreme Court Declines to Review Valuation Order.*—The Supreme Court of the United States on November 28 issued a per curiam decision reversing the decision of the district court for the western district of Missouri in the Kansas City Southern valuation case, as it had indicated it would do following the argument on November 22. The court directed the vacation of the injunction decree of the lower court which enjoined the commission from applying its order and the dismissal of the railroad petition for want of jurisdiction. The Supreme Court announced that the case was controlled by the decision in the Los Angeles & Salt Lake case of last February, in which it held that the valuation orders are not reviewable until actually used.

MOBILE & OHIO.—*Bonds Authorized.*—The Interstate Commerce Commission has authorized this company to issue $13,879,000 4½ per cent refunding and improvement mortgage bonds for the following purposes:

Of the proposed bonds, $3,000,000 are to be issued to reimburse the treasury in part for expenditures for additions and betterments not heretofore capitalized, made during the period from January 1, 1923, to December 31, 1926, in net amount of $3,258,382, and $10,879,000 to provide funds for the following purposes: (a) To pay indebtedness incurred in retiring $1,000,000 of first extension mortgage 6 per cent bonds which matured July 1, 1927, and in acquiring $379,000 of general mortgage 4 per cent bonds which mature September 1, 1938; and (b) to provide funds for paying and retiring at maturity, December 1, 1927, $7,000,000 of first-mortgage 6 per cent gold bonds, and $2,500,000 of St. Louis division mortgage 5 per cent gold bonds now outstanding.

The bonds have been sold to J. P. Morgan & Co. at 92½ giving an average annual cost to the carrier of approximately 4.90.

NEW YORK CENTRAL LINES.—*Valuation Argument.*—Oral argument on the commission's tentative valuation reports on the various properties in the New York Central system was presented before six members of the Interstate Commerce Commission on November 30 by C. C. Paulding, vice-president, and Clyde Brown, general solicitor, and by R. J. Lehman, attorney for the Bureau of Valuation. In place of the commission's tentative aggregate of final value of $1,456,968,508, the New York Central has submitted a claim for a value of $1,800,000,000 for its system properties as of valuation dates ranging from 1915 to 1919, on the basis of 1914 prices for the engineering accounts, excluding working capital, materials and supplies, and equipment wholly used in Canada. As to many of the points of difference between the railroads and the commission no argument was made, but Mr. Brown gave special attention to the subject of going concern value, saying that the Supreme Court has held that in the case of an "impressive property" an allowance of at least 10 per cent should be included. He said that he did not believe that going concern value could be determined by expert opinion or mathematically, but that the courts are coming to accept 10 per cent as a minimum. He did not contend that all roads are entitled to such an allowance, but pointed to factors in the history and condition of the New York Central which justify its being considered an "impressive" property. Among these factors he mentioned its favorable location as to grades and curvature because of its "water-level" route, saying that if $50,000,000 had been expended to produce such a low line through the mountains it would undoubtedly be reflected in its cost of reproduction.

One of the principal points made by Mr. Brown was the "discrimination" against the New York Central indicated by the percentages represented by the difference between the final value as found in the commission's tentative reports on the one hand and the sum of cost of reproduction less depreciation, land values, working capital and materials and supplies on the other hand. He said he was not assuming that the commission had specifically adopted a percentage plan of arriving at final value, but that this was the only formula left by its decisions, and he proceeded to compare the 3.81 per cent of cost of reproduction, cost now represented by this "marginal difference" in the case of the New York Central system, with the percentages for other roads, including particularly some which had contested the commission's valuation in the courts. The percentage for the Kansas City Southern, he said, was 11.26, that for the Delaware & Hudson was 8.17, that for the Los Angeles & Salt Lake, 9.22, and that for the Atchison, Topeka & Santa Fe, 5.09. No one would say, Mr. Brown contended, that some of these roads are better than the New York Central or "have in them a larger percentage of appreciation or going concern value or whatever ingredient it is which is finally thrown into the crucible of valuation to produce the ultimate result," and he declared that "such results but render more visible the darkness of the valuation process."

In discussing the restatement of the investment account Mr. Brown said that the Bureau of Valuation had declined to consider items identified by documentary evidence aggregating over $100,000,000 representing costs not charged to road and equipment at the time the outlays were made. "If the Rip Van Winkle of original cost is to be awakened to have his hair and whiskers trimmed by the application of the prudent investment theory," he said, "we think that at least his pockets should be searched."

Mr. Lehman, in his reply argument, said that the Supreme Court's decision upholding a 10 per cent allowance for going concern value was based on "impressive facts" in the particular case, and that it is not known that the same facts apply to

the New York Central situation. He said that no conclusions could be drawn from the application of the percentage formula to other valuations, which involved varying factors, but that the commission's final value figures included all intangible factors such as appreciation and going concern value. He said the court had held that specific allowance should be made for appreciation only upon a basis for intelligent ascertainment of its amount, and that it had accepted estimates of depreciation when based on an engineering inspection of the property which he referred to as comparable to the method employed in the commission's valuations.

NEW YORK, NEW HAVEN & HARTFORD.—*Equipment Trusts.*—Halsey, Stuart & Co., Inc., have offered $4,500,000 4½ per cent equipment trust certificates, series of 1927, No. 2, at prices to yield from 4 to 4.30 per cent depending upon maturity.

OAKDALE & GULF.—*Abandonment of Operation.*—The Interstate Commerce Commission has issued a certificate authorizing this company to abandon its line extending from Oakdale to Pine Prairie, 17.6 miles, in Allen and Evangeline Parishes, La. This line is leased from two lumber companies and was built by the latter to serve lumber operations since abandoned.

PENNSYLVANIA.—*Valuation Argument.*—Oral argument was heard by members of the Interstate Commerce Commission on November 28 and 29 on the various valuation reports covering the properties of the Pennsylvania Railroad, as of 1918, and of other companies in its system covered in 26 separate reports as of various dates. The time was divided between D. P. Williams, assistant general counsel of the Pennsylvania, and R. J. Lehman, attorney for the commission's Bureau of Valuation. The tentative report found a final value of $768,970,997 for the property owned by the Pennsylvania Railroad, which on valuation date consisted of the principal eastern lines of its system, the lines west of Pittsburgh and certain other properties being covered in separate reports. The figure for carrier property used by the Pennsylvania Railroad was placed at $1,078,185,180, but no total figure for the system was discussed because the reports are of various dates. Mr. Williams said the company claimed approximately $120,000,000 more for cost of reproduction new than the figure allowed in the tentative report, and he criticised methods used in arriving at cost of reproduction in many particulars, saying that while the valuation act did not tell the commission what to do with cost of reproduction new after it gets it, it at least contemplated that an estimate of cost of reproduction new should be arrived at by proper methods. After he had gone into some detail regarding the difference of some $38,000,000 between the figures of the Bureau and those of the company as to cost of track laying and surfacing, Commissioner Aitchison asked why the railroads devote so much time to that item in their arguments.

Mr. Williams said that the reason was that the Bureau of Valuation had kept the roads in the dark as to its methods of pricing such work and he suggested that a frank conference between representatives of the Bureau and the roads would do much to "clear up the atmosphere of mystery" surrounding the subject and avoid taking so much time of the commission with detail in the arguments. In referring to testimony of Vice-president Hulme that an allowance of at least $100,000,000 should be made for going concern value, Mr. Williams said that it was obvious that, although the commission may have considered the subject, no weight had been given it in its finding of final value.

In his reply argument Mr. Lehman said that Mr. Hulme had not produced any statistics that would afford a proper standard for measuring "going concern" value and that the claim had not been sustained. Regarding the tracklaying and surfacing item, he said there was no "mystery" as to the methods used by the bureau but there was a difference between it and the railroad as to the kind of track to be priced. He said the commission had held that it would not include the cost of adjusting track to the condition of the roadbed and that the figures relied on by the railroad were based on unrepresentative conditions. He contended that the cost to the railroad of manufacturing its own locomotives should be considered in reproduction, and not merely the cost of purchasing locomotives from outside companies, because it is natural and ordinary for railroads to manufacture locomotives, and that while the cost in its own shops did not include all the overhead, that had been included in other items of property or charged to operating expenses. Mr. Lehman replied to the claim for an allowance for the cost of charter and incorporation fees by saying that it was based on the present capital stock issues, which cover a large amount of non-carrier property and include much duplication in separate companies. He also contended that these costs add nothing to the value of the property. In rebuttal Mr. Williams said that Mr. Hulme had specifically stated that going concern value could not be determined mathematically but must be determined by enlightened judgment. He said that if the commission did not agree with Mr. Hulme it would naturally use its own judgment but that the law required that an allowance be made.

Average Price of Stocks and of Bonds

	Nov. 29	Last week	Last year
Average price of 20 representative railway stocks..	120.66	120.93	100.75
Average price of 20 representative railway bonds..	97.05	97.10	91.84

Dividends Declared

Boston & Providence.—2½ per cent, quarterly, payable January 1, 1928, holders of record December 20.

Cincinnati, New Orleans & Texas Pacific.—Common, 4 per cent, semi-annually; common, 3 per cent. extra, both payable December 27 to holders of record December 9.

Fonda, Johnstown & Gloversville.—Preferred, 1½ per cent, quarterly, payable December 15 to holders of record December 10.

Mobile & Birmingham.—Preferred, 2 per cent, payable January 3, 1928, to holders of record December 2.

Reading Company.—Second preferred, 1 per cent, quarterly, payable January 12, 1928, to holders of record December 22.

Officers

Executive

George Le Boutillier, vice-president of the Long Island, with headquarters at New York, has also been appointed to the newly created position of resident vice-president of the Pennsylvania, with the same headquarters. **William U. Moyer,** assistant to the president of the Pennsylvania at Philadelphia, Pa., has been transferred to New York City.

S. H. Church, assistant secretary of the Pennsylvania, with headquarters at Pittsburgh, Pa., has been elected vice-president of the Pennsylvania Company and of the Pittsburgh, Cincinnati, Chicago & St. Louis. Mr. Church will continue to act as secretary of the Pennsylvania Company and of the Pittsburgh, Cincinnati, Chicago & St. Louis, which positions he has held since 1915. Mr. Church was born on January 24, 1858, at Hamilton, Caldwell county, Mo., and entered railway service as an office messenger in the law department of the Pennsylvania Lines west of Pittsburgh, on August 1, 1875. He then served as clerk in the same department until October 1, 1879, when he became stenographer in the general superintendent's office at Pittsburgh, Pa. From January 12, 1880, until January 1, 1884, Mr. Church served as chief clerk in the general manager's office at Columbus, O., and was then appointed

S. H. Church

superintendent of transportation, which position he held until January 1, 1898. He was then appointed assistant secretary of the company's western lines and was elected secretary of those lines in 1915. He also became assistant secretary of the Pennsylvania Railroad Company in 1920. Mr. Church is also secretary of the Akron & Barberton Belt, the Monongahela Railway and the Pittsburgh, Chartiers & Youghiogheny. He was at one time secretary of the Central Indiana and the Lorain, Ashland & Southern. The latter is now abandoned.

John J. Mantell, who recently resigned as vice-president of the Erie at New York, has been elected president of the American Container Association, with headquarters at 17 Battery place, New York. Offices will also be maintained at Boston. Associated with Mr. Mantell in this enterprise are **George Nathan** and **M. Cunneff,** who recently completed the reorganization of the association, of which Nathan & Co., 14 Wall street, New York, are fiscal agents. The American Container Association is a concern the purpose of

J. J. Mantell

which is to receive, forward and deliver freight in containers. It will also have a supply of freight containers for lease to carriers or others. Mr. Mantell was born on June 24, 1884, at Elmira, N. Y. He attended Elmira Academy and began service as a clerk and stenographer in the office of the superintendent of the Erie in that city in 1899. Subsequently he was transferred to Croxton yard (Jersey City, N. J.) as a yard clerk. Advancing through various positions he was in 1908 appointed general yardmaster. From 1909 to 1915 he served consecutively as trainmaster of the Delaware and Jefferson divisions, terminal trainmaster at Jersey City and superintendent of the Wyoming division. In 1915 he became superintendent of the Jersey City terminals and remained in that position for two years at which time he was advanced to general superintendent, Lines East, of the Erie, with headquarters at New York. During the period of federal control he was terminal manager of the Port of New York for the United States Railroad Administration. At the end of federal control he became manager of the eastern region of the Erie and in 1922 was elected vice-president. It was under Mr. Mantell's direction that motor truck service in lieu of car floating for freight handling was begun by the Erie, which practice has now spread widely.

Financial, Legal and Accounting

F. H. Millard, assistant to the president of the St. Louis Southwestern, with headquarters at St. Louis, Mo., has also been appointed comptroller, with the same headquarters.

M. A. Webster has been appointed assistant treasurer, paymaster and purchasing agent of the Indianapolis Union Railway, with headquarters at Indianapolis, succeeding **J. I. Ferguson,** who has retired under pension regulations.

W. A. Colston, vice-president and general counsel of the New York, Chicago & St. Louis, with headquarters at Cleveland, O., has been granted an indefinite leave of absence on account of ill health. During his absence, the following appointments are effective: **W. J. Stevenson,** assistant general counsel at Cleveland, has been appointed acting general counsel in charge of legal matters relating to the operating and traffic departments, and **J. H. Agate,** assistant general counsel at Cleveland, has been appointed acting general counsel in charge of general corporate, financial and valuation matters.

Frederick Clark, assistant auditor of the Chicago, Burlington & Quincy, with headquarters at Chicago, for 14 years and in the service of the company for 60 years, will retire from active duty on January 1. Mr. Clark was born at Goshen, N. Y., and entered railway service in 1867 as a telegraph messenger on the Burlington. In the following year he was advanced to telegraph operator and in 1871 he was promoted to station agent. Mr. Clark entered the accounting department of the Burlington in 1882 when he was advanced to traveling auditor, becoming auditor and assistant treasurer of the Chicago & Iowa, which was absorbed by the parent company in 1887. From 1892 to 1899 he served as assistant auditor of the Burlington and he was then appointed car accountant, in which position he remained until his appointment as assistant auditor on November 17, 1913. Mr. Clark has served as assistant auditor continuously since 1913.

Operating

F. H. Garner has been appointed trainmaster of the Western division of the New York Central, succeeding **F. J. Jerome,** promoted.

Samuel W. Derr, superintendent of dining cars of the Reading for 23 years, with headquarters at Reading Terminal, Philadelphia, Pa., has retired at the age of 70.

G. H. Warfel, acting assistant to the general manager of the Union Pacific, has been appointed assistant to the general manager, with headquarters at Omaha, Neb., and supervision over all the safety work and similar matters.

S. W. Fisher, an agent for the National of Mexico at Chicago from 1923 to 1925, has been engaged by the National Railways to prepare a report on car service efficiency with a view to reducing the amounts now being paid for per diem charges.

Lynn Holladay, trainmaster on the Denver & Salt Lake, has been promoted to assistant superintendent, with headquarters at Tabernash, Colo. **E. E. Davenport,** assistant trainmaster, has been promoted to trainmaster, with headquarters at Phippsburg, Colo. Blaine Markle, conductor, has been promoted to assistant trainmaster, with headquarters at Denver, Colo.

George E. Rollins, who has been appointed superintendent of the Lakeland district of the Atlantic Coast Line, with headquarters at Dunnellon, Fla., was born on September 10, 1887, in Sumter, S. C., and was educated in high school. He entered railway service on September 23, 1908, with the Atlantic Coast Line as a brakeman on the Columbia district. He was transferred to South Rocky Mount, N. C., as yard clerk on November 17 of the same year and became brakeman again on February 27, 1910. Mr. Rollins was advanced to conductor on May 1, 1910, and was appointed night yardmaster at South Rocky Mount on June 1, 1912. He was transferred to Sumter, S. C., as general yardmaster on February 1, 1914, and to Columbia, S. C., in the same capacity on January 1, 1918. He was appointed terminal trainmaster at Florence, S. C., on June 1, 1918, and trainmaster of the Norfolk district on March 1, 1924. Mr. Rollins was appointed assistant superintendent of the Tampa district on October 1, 1925, which position he was holding at the time of his recent appointment as superintendent of the Lakeland district.

Traffic

James Cameron, who has been appointed general freight agent of the Grand Trunk Western, with headquarters at Chicago, entered the service of the Grand Trunk in the local freight

James Cameron

office at Hamilton, Ont., on September 25, 1892, as office boy. Shortly afterwards he was transferred to the division freight agent's office at Hamilton and remained there until December 1, 1899, when he went to Niagara Falls, Ont., as eastbound clerk in the local

office at that place. On August 1, 1903, Mr. Cameron went to Black Rock, Ont., as accountant. In November, 1906, he returned to the freight traffic department in the general freight office at Montreal and was transferred to the tariff bureau at Chicago in February, 1908. He was appointed chief clerk in the tariff department on November 1, 1911, and chief clerk to the freight traffic manager on May 1, 1919. Mr. Cameron was appointed chief of tariff bureau on December 15, 1919, and assistant general freight agent on July 23, 1920, which position he was holding at the time of his recent appointment as general freight agent.

Charles A. Skog, division freight and passenger agent of the Canadian National at Duluth, Minn., has been promoted to assistant general freight agent of the lines in the United States and Canada west of Detroit and St. Claire rivers, with headquarters at Chicago, Illinois.

Mechanical

M. E. Hamilton has been appointed general air brake instructor of the Denver & Salt Lake, with headquarters at Utah Junction, Colo.

Frederick H. Murray, who has been appointed mechanical superintendent of the New York and Eastern districts of the Erie, with headquarters at Hornell, N. Y., was born on February 24, 1875. He entered the service of the Erie in June, 1893, as a bolt cutter at Meadville, Pa., remaining in that position until October of the same year. From

F. H. Murray

October, 1893, until October, 1897, he served as a machinist's apprentice at the same place, and from the latter date until October, 1899, served as machinist at the following places successively: Meadville, Pa., Brier Hill, O., and again at Meadville Pa. For a year he served in the same capacity at the Phoenix Iron Works at Meadville. In October, 1900, he became roundhouse foreman of the Erie at Meadville, and in December, 1902, became general foreman at Salamanca, N. Y., being transferred in the same capacity to Jersey City, N. J., in January, 1904. He remained here until October, 1910, and was then appointed master mechanic at Port Jervis, N. Y., remaining there until September, 1914, when he was transferred in the same capacity to Jersey City, N. J., which position he held until July, 1918. He then became inspector of mechanical maintenance for the federal manager. He served in this capacity until September, 1919, and again became master mechanic at Jersey City, N. J., where he remained until February, 1920. From March, 1920, until October of the same year, Mr. Murray was shop superintendent at Susquehanna, Pa., and was then appointed mechanical superintendent of the Hornell region at Hornell, N. Y., which position he held until November, 1922, when he was appointed master mechanic at Salamanca, N. Y. He served there until June, 1927, and was then transferred in the same capacity to Cleveland, O., which position he was holding at the time of his recent appointment.

Engineering, Maintenance of Way and Signaling

Perley N. Watson, since May, 1881, superintendent of bridges and buildings of the Maine Central, with headquarters at Brunswick, Me., has retired. **Elbridge A. Johnson,** superintendent of bridges and buildings at Bangor, Me., has been transferred to Portland, Me., with jurisdiction over the entire system.

Purchases and Stores

Stephen R. Manion has been appointed storekeeper of the Northern division of the Pennsylvania, succeeding **Fred Rees,** who has been transferred to other duties.

Obituary

W. G. Humphrey, superintendent of freight loss and damage claims of the Texas & Pacific, died at his home in Dallas, Tex., on November 28.

D. C. Macdonald, assistant general claim agent of the Canadian Pacific, died at his home in Winnipeg, Manitoba, on November 24 at the age of 53 years.

James G. Burch, for many years superintendent of the American Railway Express, with headquarters at Cincinnati, O., died at his home there on November 30.

George T. Reid, vice-president and western counsel of the Northern Pacific, with headquarters at Seattle, Wash., died unexpectedly at his home there on November 30.

W. F. Nutt, industrial commissioner of the Lake Erie & Western and the Clover Leaf district of the New York, Chicago & St. Louis, died on September 10 at Frankfort, Ind.

Edward L. Brown, treasurer and comptroller of the Northern Pacific Terminal Company of Oregon until his retirement from active service on June 1, died at his home in Portland, Ore., on November 27.

Jacob Reichert, superintendent of the Savannah division of the Central of Georgia, and **B. R. Burch,** roadmaster, both of Savannah, Ga., were killed on November 24 when a freight train struck a rail motor car in which they were riding near Covington, Ga. The motor car was a highway type which had been converted into a rail car.

Frank Janes, former president of the Toledo, Angola & Western, died at his home at Toledo, Ohio, on November 19 at the age of 88 years. Mr. Janes began railroad service in 1873 as an agent on the Pennsylvania at Toledo, in the same year becoming a division freight agent. From 1893 to 1896, he acted as railroad commissioner for the Chamber of Commerce of Denver, Colo., and at the end of that time he returned to Ohio as general freight and passenger agent of the Findlay, Ft. Wayne & Western (now a part of the Baltimore & Ohio) at Findlay, Ohio. Mr. Janes was successively manager and general freight agent of the American Fast Freight line with headquarters at Chicago from 1899 to 1901. In 1911, he was appointed secretary and traffic manager of the T., A. & W., with headquarters at Toledo and in the following year he was promoted to president, retaining the position of traffic manager. Mr. Janes retired from active service in 1922 at the age of 83 years.

James Alexander McNeill, traffic manager of the Tennessee Central, died at Nashville, Tenn., on November 26, following an operation for appendicitis. Mr. McNeill was born on November 20, 1881, at New York and entered transportation service on September 1, 1902, as chief clerk to the superintendent of the Clyde Steamship Company at that point. On February 1, 1904, he was advanced to commercial agent at Atlanta, Ga., where he remained until October 1, 1907, when he was appointed manager of the Clyde Charleston Fast Freight Line. Mr. McNeill became an agent for the United States Shipping Board at Philadelphia, Pa., on June 1, 1918. During 1919 and 1920 Mr. McNeill was engaged in other than transportation service, then becoming assistant to the freight traffic manager of the Munson Steamship Line at New York. On May 1, 1922, he was appointed assistant freight traffic manager of the Tennessee Central, with headquarters at Nashville, and in June, 1923, he was promoted to freight traffic manager. Mr. McNeill was promoted to traffic manager in March, 1925, a position he held continuously until his death.